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The full details of the publication are as follows:

TITLE: Dynamic changes in gene expression and signalling during trophoblast development in the horse

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JOURNAL TITLE: Reproduction

PUBLICATION DATE: 10 July 2018 (online)

PUBLISHER: BioScientifica

DOI: 10.1530/REP-18-0270

**Dynamic changes in gene expression and signalling during trophoblast
development in the horse**

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Short title: Regulation of chorionic girdle development

Abstract

Equine chorionic girdle trophoblast cells play important endocrine and immune
20 functions critical in supporting pregnancy. Very little is known about the genes and
pathways that regulate chorionic girdle trophoblast development. Our aim was to
identify genes and signalling pathways active *in vivo* in equine chorionic girdle
trophoblast within a critical 7 days window. We exploited the late implantation of the
equine conceptus to obtain trophoblast tissue. An Agilent equine 44K microarray was
25 performed using RNA extracted from Chorionic Girdle and Chorion (control) from
equine pregnancy days 27, 30, 31 and 34 (n=5), corresponding to the initiation of
chorionic girdle trophoblast proliferation, differentiation and migration. Data was
analysed using R packages limma and maSigPro, Ingenuity Pathway Analysis and
DAVID and verified using qRT-PCR, promoter analysis, western blotting and
30 migration assays. Microarray analysis showed gene expression (absolute log FC >
2, FDR-adjusted P<0.05) was rapidly and specifically induced in the chorionic girdle
between days 27 and 34 (compared to day 27, day 30=116, day 31=317, day
34=781 genes). Pathway analysis identified 35 pathways modulated during chorionic
girdle development (e.g. FGF, Integrin, Rho GTPases, MAPK) including pathways
35 that have limited description in mammalian trophoblast (e.g. IL-9, CD40 and CD28
signalling). Rho A and ERK/MAPK activity was confirmed as was a role for
transcription factor ELF5 in regulation of the CGB promoter. The purity and
accessibility of chorionic girdle trophoblast proved to be a powerful resource to
identify candidate genes and pathways involved in early equine placental
40 development.

Introduction

Mammalian placental development requires a highly regulated series of cellular processes that transform a single layer of trophoctoderm into a complex membrane that interacts intimately with maternal tissues. Although the anatomical structure of mature mammalian placentae is highly variable between species, the processes that lead to its formation are remarkably similar (Noronha and Antczak 2010, Soncin *et al.* 2015). Trophoblast cells that give rise to the placenta must undergo a period of rapid proliferation, followed by cell movement, differentiation, migration and in some species also invasion. Once trophoblast penetrate the endometrial epithelium, their immunomodulatory behaviour becomes critical to the prevention of immune mediated pregnancy loss (de Mestre *et al.* 2011, Moffett *et al.* 2017, Noronha and Antczak 2010). These cellular processes are difficult to study in human pregnancy due to the limited availability of tissues at key consecutive developmental stages. Consequently, much work has focused on rodent models of placentation (Underhill and Robins 2016), *in vitro* models of human pregnancy (Sibley 2017), together with comparative models of placentation (Imakawa *et al.* 2017) that are both informative for understanding basic mammalian processes as well as being relevant to the species itself. Collectively these studies have revealed a number of genes and signalling pathways involved in placental development (Gupta *et al.* 2016, Haeger *et al.* 2016, Soncin *et al.* 2015) but exactly how important each of these pathways are for the multiple/overlapping processes that are occurring during development and whether these pathways are all active *in vivo* is less clear.

The early equine conceptus is unique in that it remains in a spherical shape surrounded by a glycoprotein capsule for the first 21 days of gestation. It is only after this capsule is lost that placental development begins in earnest (Allen and Wilsher

2009). Further, the late implantation in the horse (around day 40) means it is remarkably accessible and remains essentially separate to maternal tissues throughout early placental development. This provides distinct advantages over other species as it allows for isolation of pure populations of trophoblast cells with minimal manipulation (Noronha and Antczak 2010). By day 30 of gestation, the horse placenta is comprised of two main membranes. First, the allantochorion that undergoes rapid growth to form the diffuse epitheliochorial placenta of the horse primarily involved in nutritional exchange and later endocrine support of the pregnancy (Allen and Wilsher 2009). Second, the unique chorionic girdle which gives rise to the endometrial cups that secrete equine chorionic gonadotrophin (eCG) (Antczak *et al.* 2013) and modulate immunity to fetally derived tissues (de Mestre *et al.* 2011, de Mestre *et al.* 2010). Around day 27 of gestation, the trophoblast cells of the chorionic girdle begin to rapidly proliferate leading to multiple layers of trophoblast cells. Around day 30 of gestation chorionic girdle trophoblast cells receive a signal to terminally differentiate from uninucleate cells to mature eCG secreting binucleate cells (Cabrera-Sharp *et al.* 2014) a process which is close to complete by days 34-36 of gestation. As the trophoblast cells differentiate they acquire a highly invasive phenotype and penetrate the endometrial luminal epithelium and migrate down the glands. Motility then ceases, cells enlarge and form what can be seen as mature endometrial cup trophoblast. The molecular mechanisms that regulate the development of the chorionic girdle, including the coordinated processes of proliferation, differentiation, cell movement and cell migration are poorly understood.

We recently identified bone morphogenetic protein (BMP) 4 signalling as a key regulator of trophoblast differentiation in the horse (Cabrera-Sharp *et al.* 2014).

Whilst BMP4 was able to drive terminal differentiation and eCG secretion by the cells, not all cells differentiated in response to the ligand. This suggests other signals are also required to drive chorionic development. Expression of additional growth factor receptors during chorionic girdle development has also been shown (Allen *et al.* 2007, Allen *et al.* 2017, Stewart *et al.* 1995, Stewart *et al.* 1994) although the functional importance and the activity of the associated molecular pathways has not been investigated. Previous studies have used equine specific microarrays to study gene expression and/or imprinting in the placenta between days 8 and 14 and at day 34 (Brosnahan *et al.* 2012, Iqbal *et al.* 2014, Klein and Troedsson 2011, Wang *et al.* 2013). These studies have found vital insights into the role of interleukin 22 (IL-22) in trophoblast invasive capacity (Brosnahan *et al.* 2012) and to factors likely to be important in the process of maternal recognition of pregnancy (Klein and Troedsson 2011). An understanding of the gene changes in the chorionic girdle during the time of trophoblast proliferation, differentiation, invasion and induction of eCG expression and secretion would offer key advances in the knowledge of these complex processes.

In this present study, we exploited the late implantation of the equine conceptus to obtain trophoblast tissue between days 27 and 34 of pregnancy from matched mare and stallion pairs. We used whole transcriptome profiling in order to measure and compare gene expression in chorionic girdle trophoblast and adjacent regressing chorion at pregnancy day 27 (initiation of proliferation and prior to differentiation), day 30 (initiation of differentiation), day 31 (consolidation of differentiation and movement of cells) and day 34 (when the majority of the trophoblast cells have terminally differentiated into binucleate eCG-secreting trophoblast and have started to obtain invasive qualities and immunomodulatory capacities). Differentially

expressed genes were then identified to determine functions and signalling pathways whose activity was modulated over this critical period of trophoblast development. A selection of genes and pathways were subsequently validated.

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For Review Only

Materials and methods

Animals and tissue collection

The study was approved by the Ethics Committee of the Royal Veterinary College and Home Office (PPL70/6944) and all animal procedures were performed in accordance with the Animals (Scientific Procedures) Act 1986 guidelines set by the Home Office, United Kingdom. Five mares (*Equus caballus*) aged between 3–7 years were of Dartmoor or Welsh breed and maintained in a paddock on grass and supplemented with hay over the winter. The reproductive cycle was manipulated using prostaglandin F₂, and pregnancies were established as previously described (de Mestre 2011) using semen from two stallions, standard artificial insemination and with ovulation induced using either 1500 iu hCG (Chorulon, MSD Animal Health, Milton Keynes, UK) intravenously or 2.1 mg Ovuplant® (Dechra Veterinary Products, Shrewsbury, UK) subcutaneously. Ovulation was confirmed (day 0) and then pregnancies were monitored biweekly and on the day of isolation using transrectal ultrasonographic evaluation of the reproductive tract. Only those conceptuses confirmed to have a normal growth rate and normal anatomical development were included in the study. The same mare and stallion pairs (n=5) (Supplementary Table 1 shows exceptions to this) were used to generate multiple conceptuses that were recovered at day 27, 30, 31 and 34 of pregnancy via non-surgical uterine lavage as previously described (de Mestre *et al.* 2008). Additional mare and stallion combinations (n=3) generated conceptus tissue that was subsequently used for qRT-PCR and western blotting. Conceptuses were flushed into sterile phosphate buffered solution supplemented with 2 x penicillin-streptomycin (5000U/ml, Invitrogen Gibco, Hemel Hempstead, UK) and placed immediately onto ice for transport to the laboratory. Conceptuses were dissected in PBS-2xPenStrep into components,

chorionic girdle, chorion, allantochorion, yolk sac and fetus using a dissecting microscope (Zeiss, Cambridge, UK). Dissected tissue was immediately snap frozen in liquid nitrogen and stored at -80° C until RNA isolation or western blotting was performed.

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Isolation and qualitative and quantitative analysis of RNA

Total RNA was isolated from snap-frozen equine conceptus tissue, following homogenization by QIAshredder (Qiagen, Venlo, The Netherlands), using a Qiagen RNeasy kit (Qiagen) as directed by the manufacturer. RNA was additionally treated with DNase on a column (Qiagen) as described by the manufacturer. RNA concentration and purity was determined by spectrophotometry, using the Nanodrop ND1000 spectrophotometer. The mean 260/280 ratio was 2.10 (range 2.02-2.16). RNA quality was additionally assessed using Agilent 2100 Bioanalyser. The mean and median RNA integrity number (RIN) was 9.1 (range 8 to 9.9) (Supplementary Figure 1). Samples were stored at -80°C.

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Microarray analysis

A 44K probe, single colour, equine Agilent Microarray (cyanine 3-CTP; Agilent Technologies UK Ltd, Stockport, UK) was carried out by Dr. Lucille Rainbow, at the Centre for Genomic Research, The University of Liverpool. The above described DNase treated RNA samples were submitted for analysis. Using RNA spike-in kits (Agilent Technologies UK Ltd) and via the manufacturer's instructions, 50 ng of RNA sample was spiked with quality controls and run. Complimentary RNA (cRNA) was

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synthesised and amplified using the low input quick amp labelling kit via the
170 manufacturer's instructions (Agilent Technologies UK Ltd.). A specific T7 RNA
polymerase blend was used to generate fluorescent cRNA via incorporation of
Cyanine 3-CTP. cRNA was purified with the RNeasy mini spin column kit (Qiagen),
following the manufacturer's protocol and concentration measured on the NanoDrop
ND-1000 Spectrophotometer (Thermo Fisher Scientific, Hemel Hempstead, UK).
175 cRNA was hybridised to the microarray chip using the gene expression hybridization
kit (Agilent Technologies UK Ltd.), using the manufacturer's instructions and then
hybridized for 17 hours at 65°C and 10 g using the Tecan HS Pro hybridization
station (Tecan group Ltd, Reading, UK). Microarray chips were washed with wash
buffer and scanned by the Agilent DNA microarray scanner G2505C (Agilent
180 Technologies UK Ltd). Samples were subjected to Agilent quality control measures,
which all entities passed. Data has been submitted to NCBI Gene Expression
Omnibus (GSE113072).

Following Principal Component Analysis (PCA) (Supplementary Figure 2), a subset
of 2 arrays (out of the total of 40) were removed. These two samples were
185 subsequently shown by qRT-PCR (data not shown) to express significantly aberrant
levels of well-known markers of chorionic girdle cells such as chorionic
gonadotrophin A (*CGA*), chorionic gonadotrophin B (*CGB*) and glial cells missing 1
(*GCM1*). Pre-processing steps of background correction and between-array
normalization were performed prior to analysis using the software packages R
190 (<http://www.r-project.org>) and Bioconductor (<http://www.bioconductor.org>).
Differential expression analysis was performed using the R package limma (Ritchie
et al. 2015). Pre-processing steps of background correction and between-array
normalization were implemented prior to analysis with differentially expressed genes

identified using a linear model fit (lmFit) and an empirical Bayes method (eBayes).

195 Genes with an absolute log fold change > 2 and false discovery rate (FDR)-adjusted $p < 0.05$ were considered significant. Cluster gene analysis was performed using maSigPro (Conesa and Nueda 2017) to group genes based on their expression profile. The cut off criteria used in maSigPro were fold change >2, $R^2 > 0.7$ and p value of > 0.01. DAVID Bioinformatics Resources 6.7 (Huang, *et al.* 2009) functional
200 annotation tool was used to evaluate signalling pathways within gene clusters. Gene lists were input to DAVID, selected to compare against 'All species' and gene names defined as 'Official_gene_symbol'. Output signalling pathways in KEGG and PANTHER databases were considered, with parameters set to include pathways containing >5 genes with $p < 0.01$ (Fishers Exact test).

205 The normalised intensity data for chorionic girdle tissue only was also imported into Ingenuity Pathway Analysis (IPA) V119043121 software (Qiagen) for analysis of activation of canonical pathways and regulator effect networks. For analysis in IPA, one-way ANOVA ($P < 0.05$) applied across the time-course was used to identify gene changes and pathway activation within the chorionic girdle. Output data was
210 represented for canonical pathway activation and as summary lists of genes involved in effector networks of interest.

Multiplex qRT-PCR

Eight genes were selected from the array to fit the following criteria: up-regulated or
215 down-regulated with a fold change 2 – 5 or >20 in chorionic girdle between day 27 and day 34. As a control, Nuclear RNA Export Factor 1 (*NXF1*), a gene that remained constant in expression in the chorionic girdle between days 27 and 34,

was also assessed. Primers were designed using GeXP eXpress Profile software in accordance to manufacturers instructions (Beckman Coulter, High Wycombe, UK),
220 using mRNA sequences obtains from Ensembl genome browser (<http://www.ensembl.org>)(Supplementary Table 2). Target-specific reverse transcription and PCR amplification was performed as previously described (Hu, et al. 2012, Staines, et al. 2016, Xie, et al. 2012) and in accordance to manufacturer's instructions (Beckman Coulter). In brief, a reverse transcription master mix was
225 prepared as detailed in the GeXP starter kit (Beckman Coulter) and performed using a G-storm thermal cycler, using the programme protocol 48°C (1 min), 42°C (60 mins), and 95°C (5 mins). From this an aliquot was of each reverse transcription reaction was added to GenomeLab kit PCR master mix (Beckman Coulter) and Thermo-Start Taq DNA polymerase (Thermo Fisher Scientific, Hemel Hempstead,
230 UK). PCR reaction was again performed using G-Storm thermal cycler with a 95°C activation step 10 mins, followed by 35 cycles of 94°C (30 secs), 55°C (30 secs) and 70°C (60 secs). Products were separated and quantified using CEQ™ 8000 Genetic Analysis System and GenomeLab Fragment Analysis software (Beckman Coulter). Genes of interest were normalised against the geo-mean of the two housekeeping
235 genes, glyceraldehyde 3-phosphate dehydrogenase (*GAPDH*) and succinate dehydrogenase complex, subunit A (*SDHA*), as previously described (Vandesompele *et al.* 2002).

Western Blotting

240 Tissues were ground and lysed on ice in 200 µl lysis buffer containing: 150 mM sodium chloride (Sigma Aldrich, Haverhill, UK), 1.0% (v/v) Nonidet P-40 (Sigma

Aldrich), 0.5% (w/v) sodium deoxycholate (Sigma Aldrich), 0.1% (w/v) Sodium dodecyl sulfate (Sigma Aldrich), 50 mM Tris, pH 8.0 (Sigma Aldrich), 1 mM phenylmethylsulfonyl fluoride (Sigma Aldrich, added at time of use). Protein concentration was determined using Bradford assay (Bio-Rad Laboratories, Hemel Hempstead, UK) and read using a Tecan infinite pro 200 plate reader, with Magellan 7 software (Tecan group Ltd.). Samples were stored at -20°C until use.

To assess total and Phospho p44/42 extracellular signal regulated kinase (ERK1) protein expression, 50 µg of protein was loaded per well and separated by SDS-PAGE on a 10% (wt/vol) polyacrylamide gel before being transferred to a Polyvinylidene difluoride membrane (GE Healthcare Life Sciences, Pittsburg, USA) using a Mini-PROTEAN Tetra cell wet transfer unit (Bio-Rad Laboratories). The membranes were blocked in Tris-buffered saline-Tween 20 containing 5% (wt/vol) nonfat milk (Marvel, Premier Foods Group, London, UK) for a total of 3 hours. Membranes were incubated overnight at 4°C in a 1:1000 dilution of rabbit antihuman p44/42 total ERK or Rabbit anti-human p44/42 phospho ERK (Cell Signalling Technology, Leiden, The Netherlands) polyclonal antibodies each in Tris-buffered saline-Tween 20 containing 5% (wt/vol) nonfat milk. Membranes were incubated with a 1:10 000 dilution of goat anti-rabbit IgG secondary antibody conjugated to horseradish peroxidase (Sigma) in Tris-buffered saline-Tween 20 containing 5% (wt/vol) nonfat milk. Proteins were visualized by incubating with ECL plus detection reagents (PerkinElmer, Beaconsfield, UK) and exposed onto Amersham hyperfilm ECL (GE healthcare Lifesciences). As a loading control, membranes were stripped and reprobed for β-actin using a monoclonal mouse β-actin antibody (Sigma) at a dilution of 1:10000.

Cloning of ELF5 and transactivation experiments

Full length equine ELF5 was cloned into the pCMV-Myc expression vector for co-transfection experiments. ELF5 was amplified by RT-PCR from equine day 34 chorionic girdle cDNA using primers ELF5F
270 CCATGGTACCATGATGTTGGACTCAGTGAC and
ACGGTCTAGATCATAGCTTGTCTCCTCCTGCC. The pCMV-Myc vector and ELF5 PCR product were subjected to digest with XbaI and KpnI restriction and gel purified before ligation into pCMV-myc. Successful cloning was assessed by analytical digest
275 and Sanger sequencing. Truncated promoter constructs of specific lengths of the CG/LHB promoter were constructed *via* PCR from equine genomic DNA as previously described (Read *et al.* 2018). The immortalized cell line BeWo Choriocarcinoma (BeWo) were cultured in Dulbecco's modified Eagle's-medium (DMEM) supplemented with 10% fetal bovine serum, penicillin–streptomycin and l-
280 glutamine, at 5% CO₂ at 37°C. Cells were transiently transfected using Lipofectamine 2000 transfection reagent (Invitrogen) *via* the manufacturers' instructions. Cells were transfected in 24-well plates, at a confluency of 80%, with each of four LHB promoter inserts, alone or in combination with concentrations of pCMV-myc-ELF5 (0–150 ng), with DNA input controlled with an empty control
285 pCMV-myc vector. Renilla was co-transfected as an internal control at a concentration of 0.05 ng per well. Twenty-four post-transfection, cell lysates were harvested and promoter activity was measured using the Dual-Luciferase[®] Reporter Assay (Promega, USA), as per the manufacturer's instructions.

Culture of equine trophoblast and scratch assays

Chorionic girdles from day 34 conceptuses were dissected along the junction with

the adjacent allantochorion and chorion and girdle cells were gently scraped from the basement membrane and underlying mesodermal cell layer using a sterile scalpel blade and pure trophoblast cultured as previously described (Cabrera-Sharp *et al.* 2014). Cells used in the study were between passage 3-5. Scratch assays were performed as previously described (Liang *et al.* 2007). Confluent monolayers of cells were scratched, both horizontally and vertically, to form a cross shaped wound. The same position on each arm of the wound was imaged at both time 0 and 24 hours and the distance moved calculated by subtracting the width of the scratch at 24 hours from that at time 0 (following a preliminary experiment performed at 0, 8, 24 and 48 hours). Average width of a scratch was calculated by measuring its area and dividing by its length. At time 0 scratches were treated with either vehicle (ethanol used to resuspend the Rhosin) or Rhosin (Insight Biotech), 50 μ M, a concentration that has been shown previously to inhibit Rho activation by approximately 80% (Shang *et al.* 2013). Following treatment cells showed no overt changes in morphology or cell death, maintaining a healthy monolayer appearance in all regions outside of the scratch. All experiments were done in duplicate and consisted of four independent wells per treatment, each well measured at 4 separate points, giving a total of 16 measurements per treatment group per experiment. Statistical differences in cell movement was compared using a paired t-test in GraphPad Prism.

Results

Transcriptomic profile of chorionic girdle between days 27 and 34 of

pregnancy

The data reported below used sibling conceptuses obtained at days 27, 30, 31 and 34 of pregnancy over two breeding seasons (total n=38 samples, n=4-5 each time point and each tissue). All conceptuses used in the study showed normal growth patterns and had normal placental and fetal anatomy as assessed clinically by transrectal ultrasonography and grossly under a dissecting microscope. For mare stallion pairs that did not generate a full set of conceptuses, half-sibling conceptuses were used (Supplementary Table 1).

The samples grouped well by tissue and gestational age (Supplementary Figure 2). Analysis of global changes in gene expression revealed that 2207 probes were differentially expressed in the chorionic girdle and chorion across one or more time points or between tissues (Absolute log fold change >2, FDR-adjusted $p < 0.05$) (Supplementary Table 3). Gene expression in the control tissue (chorion) was remarkably stable throughout the gestation period studied, with only 11 genes differentially expressed in the chorion between days 27 and 34 (Table 1). In contrast, gene expression was rapidly induced in the chorionic girdle over the same time period (Table 1), with a peak of 781 genes differentially expressed in the chorionic girdle between day 27 and day 34. Consistent with a wave of genes that are turned on or on and off again during chorionic girdle development, there was significant overlap in the differential expression of genes at day 30, 31 and 34 (Figure 1A). Similarly, there was a significant increase in differential gene expression between the

chorionic girdle and adjacent chorion between days 30 and 34 (Table I, Figure 1B). At day 27, no genes were differentially expressed between chorionic girdle and chorion but this rapidly changed during chorionic girdle development and by day 34 there were 1454 probes representing 754 genes that were differentially regulated between the two tissues.

Validation of genes by qRT-PCR

To validate the microarray data, multiplex qRT-PCR was performed. Eight genes were selected from the array to fit the following criteria: up/down-regulated with an absolute fold change between 2 – 5 or >20 in the chorionic girdle between day 27 and day 34. Of the 8 genes analysed, 6 of the expression profiles (krupel like factor 10 (*KLF10*), E74-like factor 5 (*ELF5*), paired box protein 6 (*PAX6*), SMAD family member 7 (*SMAD7*), Cytochrome P450 17A1 (*CYP17A1*) and *NXF1*) were highly reproducible between the microarray data and multiplex qRT-PCR data (Figure 2). The remaining two genes (S100 Calcium Binding Protein A12 (*S100A12*) and Forkhead Box Protein 1 (*FOXP1*)) showed very similar patterns of expression in the two tissues, although statistical significance did not always match. The magnitude of the fold change in expression in the chorionic girdle between days differed between assays for some genes, although always remained in the same direction and, with the exception of *FOXP1*, also continued to fall into the same magnitude grouping used for its selection (2-5 or >20). The control gene, *NXF1* did not change in expression in the chorionic girdle at any time point between days 27 and 34. Although the fold change in expression was significantly different between the chorionic girdle and chorion for *NXF1*, the magnitude was always less than 1.5 fold.

Top upregulated and downregulated gene lists

The 20 top genes that were up/downregulated in the chorionic girdle between day 27 and 34 (absolute fold change > 2, $p < 0.05$) are listed in Table 2 (up) and Table 3 (down). Of the top 20 upregulated genes at day 30, 15 genes also appeared in the top upregulated gene list for days 31 and/or 34. *CGA*, *CGB*, *GCM1*, *MHC Class I*, were all in the top 20 upregulated gene list. Interleukin 22, previously shown to be highly upregulated in day 34 chorionic girdle, was not one of the top 20 upregulated genes but was upregulated in day 34 chorionic girdle compared with day 27 chorionic girdle (log fold change 3.94, $p = 0.001$). Top upregulated genes included Fatty Acid Binding Protein 4 (FABP4) that peaked in expression at day 31 and transcription factor BCL6, highly upregulated at days 30 through to 34. Immune genes, such as CXCL14, also featured in the top 20 list with expression highly induced as early as day 30.

Clustering of genes into expression patterns

Next, the R package SigPro software was used to cluster genes based on their expression patterns across both time and tissues. Nine different gene expression profiles were identified (Figure 3) each containing between 13 and 374 genes with an R^2 regression fit of > 0.7 . Supplementary Table 4 provides full gene lists for each cluster. For example, genes included in the gene list for Cluster 1 increased in expression in the chorionic girdle (Figure 3, cluster 1, red) and remained constant in expression in the chorion (green) over the same time period. Genes in clusters 1 and 7 which remained relatively constant in expression in the chorion and gradually increased or decreased in expression in the chorionic girdle between days 27 and 34

385 (cluster 1 and 7) were identified as genes and components of signalling pathways likely to be involved in cellular growth as either regulators of proliferation and/or differentiation or as markers of the change in the cells differentiation state. Gene lists from these two clusters were input into DAVID functional annotation tool which identified 37 pathways ($p < 0.01$) (Table 4). Pathways of note were epidermal growth factor (EGF) and vascular endothelial growth factor (VEGF) signalling (11 and 10 entities respectively), integrin signalling (22 entities) and cytoskeletal regulation by Rho GTPases (10 entities). Genes that showed a similar pattern to clusters 1 and 7 but showed higher expression values by day 30/31 were clustered into groups 4 and 5. Four pathways were enriched in this gene list including genes related to the function of the lysosome (13 genes) and cytoskeletal regulation by Rho GTPases (9 entities). Genes that remained relatively constant in the chorion and rapidly increased in expression in the chorionic girdle at day 34 more consistent with genes associated with the acquisition of an invasive phenotype were also identified (Figure 3, Supplemental Table 3, Clusters 2 and 6). The pathways represented by clusters 2 and 6 included Focal Adhesion (16 entities), chemokine signalling (11 entities) and Tight Junctions (10 entities) (Table 4). Cluster 3 revealed 83 genes that peak at days 30/31 specific to when differentiation is initiated (Supplementary Table 3, cluster 3 gene list). Clusters 3, 8 and 9 were not further analysed in pathway analysis due to relatively low total number of genes on these lists.

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Top regulator effector networks

Next, IPA was used to further explore the effector networks active during development of the chorionic girdle. Networks in the chorion were not assessed as

only 11 genes were differentially expressed in day 34 chorion (compared to day 27)
410 and no genes differed in expression at other time points. The top 5 regulated effector
networks at days 30, 31 and 34 (compared with day 27 chorionic girdle) are listed in
Table 5. Activation scores were all high, suggesting that gene expression data is
highly supportive of the networks identified. Consistent with key cellular processes
known to occur during chorionic girdle development, two cellular processes were
415 highly represented in these lists; cell movement/cell migration/invasion (6/15
networks) and proliferation/differentiation (5/15 networks). Cell movement and
migration pathways demonstrated an increase in activation score over time from
8.485/6.062 at day 30 to 11.25 at day 31 and scores of 10.8, 9.865 and 8.014 for
migratory pathways at day 34. By day 31, cell cycle regulation and S-phase
420 checkpoint control (activation score 9.925) were processes induced in trophoblast
and this continues to day 34. Based on the directionality of the expression change
in the microarray data, a number of upstream regulators of these effector networks
were identified and are also listed in Table 5.

425 ***Top canonical pathways***

IPA was also used to assess the activation of canonical pathways in the chorionic
girdle between days 27 and 34 of pregnancy using the full gene list. There were
dynamic changes in predicted pathway activation in the chorionic girdle during
development (Figure 4). Out of a total of 533 pathways stored in the IPA software at
430 the time of analysis, 35 pathways had an activation z-score of >2 or <-2 ($P<0.05$) at
one or more time points during chorionic girdle development (Figure 4). These
included 16 pathways known to be associated with cell movement, 12 pathways

known to be involved in cellular immune responses and 12 pathways associated with cell cycle regulation and/or differentiation (Figure 4). There was a predominance of movement pathways related to signalling by Rho GTPases including activation of RhoA, regulation of actin-based motility by Rho and inhibition of the inhibitory signal, RhoGDI signaling (Figure 4). Cell cycle pathways with positive activation scores included ILK signaling, Aryl Hydrocarbon receptor signaling (which peaked at day 30 around initiation of differentiation) and TWEAK signalling.

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Validation of genes and pathways

Next, in order to further explore the activity of the genes and pathways identified above, one gene and two pathways were selected for further investigation.

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ELF5 transactivates the CGB promoter

Ets family transcription factor ELF5 was selected from the genes confirmed by qRT-PCR for further investigation due to its temporal expression profile that suggested a possible role in regulation of trophoblast development. RT-PCR amplification of ELF5 and ELF4 (a related family member) genes in equine chorionic girdle and control chorion tissues from gestational ages 27-34 days (Figure 5A) showed that ELF5 was expressed in the chorionic girdle and chorion at all time-points, with evidently higher expression in the chorionic girdle compared to the chorion. Gene expression of ELF4 was not detectable in any equine conceptus tissues tested, regardless of gestational age. Expression in control spleen tissue demonstrated successful amplification of the ELF4 gene (Figure 5A). Western blot analysis

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confirmed the presence of an approximately 37 kDa protein in the chorionic girdle similar to the predicted size of ELF5 (31kDa) (Supplementary Figure 3).

This expression profile in the chorionic girdle combined with bioinformatics analysis of the CG/LH promoter that revealed 24 predicted ELF5 binding sites (data not shown) led us to hypothesize that ELF5 may play a role in inducing CG/LHB expression, a key gene induced during differentiation of chorionic girdle cells and the rate limiting subunit required for eCG production (de Mestre *et al.* 2009). To explore this further, we used the expression data generated on the microarray to determine if an association existed between CG/LHB and ELF5 expression in all chorion and chorionic tissues (Figure 5B). ELF5 and CG/LHB mRNA expression in individual chorionic girdle and chorion tissues was strongly positively correlated ($R^2= 0.80$, $p < 0.0001$).

To determine whether activity of the CG/LHB promoter was driven by ELF5, co-transfections were carried out in COS7 cells using 250 ng of four truncated *CG/LHB* promoter inserts (Read *et al.* 2018), either alone, with addition of 150 ng pCMV-myc-Empty vector, or with 150 ng pCMV-myc-ELF5 (Supplementary Figure 4). Promoter activity was assessed using luciferase assays (Figure 5C). The 2157 bp *CG/LHB* construct, that contained 24 predicted binding sites for ELF5 was transactivated by pCMV-myc-ELF5, 8.4-fold (SEM= ± 4.4 , $p=0.0002$) over pCMV-myc-Empty. The 1888 bp *CG/LHB* promoter, containing 11 predicted binding sites was driven 5.8-fold (SEM= ± 2 $p=0.0023$) by pCMV-myc-ELF5 above pCMV-myc-Empty. No significant increase in promoter activity was observed for the pGL3-basic, pGL3-119 (no predicted sites) or pGL3-335 (1 predicted site) promoter constructs when co-transfected with pCMV-myc-ELF5. The pCMV-myc-Empty vector had no driving

activity on any of the promoter constructs.

Validation of classical MAPK signalling in the chorionic girdle

Signalling molecules downstream of a number of pathways predicted above to be
485 modulated during chorionic girdle development (FGF, EGF, VEGF) included
classical mitogen activated protein kinase (MAPK) signalling molecules, ERK1/2.
Western blot analysis demonstrated that ERK/MAPK pathways were active in the
both the chorionic girdle and chorion at all time points as demonstrated by detectable
p44/p42 protein bands (Figure 6A). An increase in phosphorylation of the p44
490 (ERK2) protein at day 30 of pregnancy in the chorionic girdle was observed with no
apparent change in the phosphorylation of the p42 protein (ERK1). Densitometry
analysis of phospho ERK1/2/Total ERK1/2 (n=3 conceptuses per time point) showed
a significant increase in phospho ERK at day 30 compared with day 27 in chorionic
girdle ($p=0.0348$) but not chorion (Figure 6B). In addition, using qRT-PCR we
495 assessed the expression profile of ERK1/2 regulated transcription factors, serum
response factor (*SRF*) and CRE binding protein 1 (*CREB1*) in the chorionic girdle.
Correlating with the increase in ERK1/2 activity at day 30, *SRF* and *CREB1*
expression significantly increased at day 31 in the chorionic girdle when compared to
day 27 (Figure 6C).

500

RhoA is involved in migration of equine chorionic girdle trophoblast

A number of pathways related to Rho signalling were identified in Figure 4. In order
to further explore the functionality of these pathway, primary day 34 equine

trophoblast cells were cultured in the presence or absence of Rho inhibitor Rhosin
505 (50 μ M) and trophoblast migration assessed using a scratch assay (Figure 7A).

There was no change in the morphology of the cells or evidence of cell death
following treatment with Rhosin or ethanol (control). Treatment of chorionic girdle
trophoblast with 50 μ M Rhosin resulted in a significant reduction in trophoblast
migration into the scratch compared to ethanol control treated cells ($p < 0.001$) ($n = 8$, 4
510 readings per scratch) (Figure 7B).

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515 **Discussion**

Chorionic girdle development requires a number of co-ordinated processes that must occur in a timely and controlled manner. Establishing the global gene expression profile for genetically paired conceptuses over a 7 day period of pregnancy (day 27 to 34) has provided a powerful insight into the genetic landscape of the trophoblast cells as they terminally differentiated from uninucleate trophoblast into eCG secreting binucleate trophoblast with an invasive phenotype. Fluctuations in gene expression was both dynamic and very specific to the CG whilst the adjacent chorion had remarkably stable gene expression over the same time period. The abundant genes and pathways identified were highly consistent across laboratory and bioinformatic approaches, with three of these, ELF5 function, ERK1/2 activity and Rho A function, further confirmed in functional assays.

Initial PCA visualisation of grouping of the tissues demonstrated distinct gene expression profiles in the chorionic girdle at all time points assessed, whilst in contrast, chorion tissues from all timepoints were genetically identical. In total, only 11 genes were differentially expressed in the control tissue, chorion compared with 1625 in the chorionic girdle. Although chorionic girdle trophoblast at day 30/31 are still primarily uninucleate trophoblast, the gene profile already had substantially shifted (116 and 317 genes respectively) when compared to day 27 cells. This corresponds to the time at which a large proportion of chorionic girdle trophoblasts rapidly proliferate and undergo differentiation to become terminally differentiated binucleate trophoblast cells, and is also the period immediately prior to the significant induction of eCG expression (de Mestre *et al.* 2009, Read *et al.* 2018). The genes and pathways switched on/off in this early period in girdle development will provide important clues to the initiators of proliferation, differentiation and eCG expression.

540 For example, fatty acid binding protein FABP4, a gene known to regulate both proliferation and differentiation genes in human trophoblast cell line HTR8/SVneo (Basak *et al.* 2018), was found to peak in expression at day 31. C-X-C Motif Chemokine Ligand 14 (CXCL14) expressed in human villous cytotrophoblast (Kuang *et al.* 2009) and known to negatively regulates trophoblast invasion was highly
545 induced by day 30. It is plausible that CXCL14 is playing a similar role in the chorionic girdle, preventing premature invasion of early forming binucleate cells into the endometrium which usually does not take place until day 34-38.

In order to further establish that changes in gene expression observed in microarray analysis were truly representative of the biology of the trophoblast cells 8 genes
550 were verified by qRT-PCR and all demonstrated the same expression pattern to that of the microarray. A small number of genes shown previously to be expressed in day 34 chorionic girdle (Bacon *et al.* 2002, Brosnahan *et al.* 2012, de Mestre *et al.* 2009) featured on gene and signalling pathway lists providing further confirmation of the validity of the large dataset. For example, gene cluster analysis identified the
555 SMAD1/5 arm of the TGF β signalling pathway to contain multiple differentially regulated genes in the chorionic girdle, including *BMP4*, its receptor bone morphogenic protein receptor 2 (*BMPRII*) and *SMAD1/5*, all consistent with a known function of this pathway in equine trophoblast (Cabrera-Sharp *et al.* 2014). EGF signalling in chorionic girdle cells as measured by canonical pathway analysis
560 increased in activity in the chorionic girdle supporting previously reported expression profiles of EGF and EGF receptors in the chorionic girdle (Allen *et al.* 2017, Stewart *et al.* 1994). The function of EGF in the chorionic girdle is not known but in human trophoblast EGF has been shown to promote proliferation through activation of AKT and ERK1/2 signalling downstream of EGFR (Fock *et al.* 2015, Costa *et al.* 2016).

565 The ERK/MAPK signalling pathway was confirmed here to be functional in chorionic
girdle trophoblasts, increasing in activity at day 30 of pregnancy when compared to
day 27. It is therefore likely that EGF signalling acting via ERK1/2 is indeed active in
the chorionic girdle.

Phosphorylation of p44/p42 and nuclear translocation is thought to be important for
570 cell cycle re-entry into S-phase in response to mitogenic activators (Brunet *et al.*
1999). S-phase checkpoint effector networks are identified at days 31 and 34 here,
so it is possible that the MAPK/ERK signalling pathway is crucial for this regulation.
Other described roles for the MAPK/ERK pathway include regulation of cellular
growth differentiation (Brunet *et al.* 1999, Dumaz and Marais 2005). Due to the
575 ubiquitous nature of the MAPK/ERK pathway, it is likely that it plays roles in multiple
cellular processes during chorionic girdle development, perhaps activating the cell
cycle at day 30-31 and later differentiation at day 31-34.

Fibroblast growth factor 7 (*FGF7*), a growth factor expressed by bovine immature
trophoblast giant cells (Pfarrer *et al.* 2006), was significantly upregulated between
580 day 27 and 34, as was the related family member Fibroblast growth factor binding
protein 1 (*FGFBP1*). Previous studies have reported fibroblast growth factor 2
(*FGF2*), its receptors (fibroblast growth factor receptor 1-4 (*FGFR1-4*)) and FGF
binding protein (*FGFBP*) to be expressed in equine trophoderm earlier in
pregnancy between days 14 and 28 (de Ruijter-Villani *et al.* 2013). Supportive of a
585 possible autocrine function for *FGF7* in the chorionic girdle, FGF signalling was
identified in gene cluster analysis with 9 FGF regulated genes found to be
induced/repressed between days 27 and 34 and downstream ERK1/2 activity
confirmed in chorionic girdle by western blot. This is consistent with other species,
where FGF proteins are thought to play a key role in trophoblast development

590 including hCG production (Jeong *et al.* 2016) via signalling through ERK (Kunath *et al.* 2014, Taniguchi, *et al.* 2000, Yang *et al.* 2011). The role for FGF signalling in the equine placenta remains unknown, but data here suggests an autocrine function for FGF signalling in trophoblast development in the chorionic girdle. Based on its high expression pattern, it is plausible that it may also act in a paracrine manner on
595 adjacent tissues such as the allantochorion thus co-ordinating chorionic girdle development and implantation.

ELF5 mRNA expression was found to be one of the most markedly induced genes between days 27 and 34 with maximal expression at day 34. Transactivation studies demonstrated that *ELF5* was able to drive the CG/LHB promoter between the
600 regions of 335 and 2500 bp relative to the translation start codon suggesting it may play a role in biochemical differentiation of trophoblast. The large number of potential *ELF5* binding sites in this region suggests that *ELF5* may drive promoter activity by acting directly to multiple sites in the distal promoter, although further work is required. *ELF5* was considered widely considered to be a 'gatekeeper' of stem cell
605 status in mouse studies (Hemberger *et al.* 2010, Pearton *et al.* 2011, Pearton *et al.* 2014). More recently, work suggests that *ELF5*'s function changes in a concentration dependent manner with high levels of *ELF5* triggering trophoblast differentiation (Latos *et al.* 2015) achieved through an interaction with transcription factor AP-2 gamma (TFAPAP2C). Interestingly we did detect *ELF5* transcript in day 27 chorionic
610 girdle, albeit at much lower levels (data not shown). Therefore, it is plausible that the chorionic girdle trophoblast utilise *ELF5* in a similar manner to mouse cells, with low levels that *ELF5* playing a role in maintaining the stem cell status of progenitor chorionic girdle cells (supported here in the pathway analysis which show loss of

stem cell pathways between day 27 and 34) and high levels of ELF5 at day 34
615 driving the switch to differentiation and induction of CG/LHB expression.

Proliferation pathways consistently arose in regulator effect networks at all time
points and were represented in canonical pathway analysis by pathways, such as
endothelin 1 signalling and cyclin dependent kinase 5 (CDK5) signalling. The
kinetics of these pathways suggest a reduced, yet ongoing requirement for
620 trophoblast proliferation throughout chorionic girdle development. The upstream
regulator EP400 was identified as a top upstream regulator at days 31 and 34 of
pregnancy, and is known to play a role in cellular proliferation in other cells types
(Mattera *et al.* 2009). The majority of other signalling data suggests repression of
proliferation signalling pathways. Endothelin signalling in cancer cells is known to
625 play diverse roles in proliferation, apoptosis and migration (Rosano *et al.* 2013) and
TNF-related weak inducer of apoptosis (TWEAK) signalling is well defined to
promote proliferation of cardiomyocytes (Novoyatleva *et al.* 2010). It is likely that
pathway suppression represents a continuous but proportionally decreasing
population of proliferating cells, as increasing numbers of chorionic girdle
630 trophoblasts terminally differentiate, losing their proliferative capacity.

A number of pathways associated with cellular differentiation emerged, including
those involved in cell cycle regulation, loss of pluripotency, and AHR and MAPK/ERK
signalling pathways. Repair of DNA and S-phase checkpoint control were
consistently identified throughout chorionic girdle development as important effector
635 networks. Additionally, transcription factors E2 factor (E2F) and E2 factor 2 (E2F2)
were identified as top upstream regulators at all timepoints in the chorionic girdle.
The canonical E2Fs (E2F1, E2F2 and E2F3) regulate trophoblast giant cell
differentiation through the promotion of the cell endocycle, via regulation of cyclin E

and S-phase control (Chen *et al.* 2012, Ouseph *et al.* 2012). A conserved role for
640 E2F proteins in regulation of cyclins D and E and subsequent G1 cell cycle
progression has been observed in human placental cell differentiation (Ohtani *et al.*
1995). The data generated here suggests that the role for E2F and E2F2 is also
conserved in the regulation of the cell cycle in differentiating equine chorionic girdle
trophoblasts. Canonical pathway heatmaps indicated that cyclin signalling pathways
645 were upregulated in the chorionic girdle at day 30 of pregnancy, with a subsequent
loss of activation at days 31 and 34. Equine trophoblasts differ from human and
mouse counterparts (MacAuley *et al.* 1998), in that they are binucleate as opposed
to multinucleate and do not possess the increased gene number observed in
endoreduplicated cells (Wooding *et al.* 2001). Nevertheless, it is clear that regulation
650 of cell cycle progression and cyclin signalling pathways retain an integral role in the
process of cell differentiation in the chorionic girdle.

Evidence for trophoblast movement was supported by the identification of multiple
signalling pathways including focal adhesion, Rho signalling and Integrin signalling.
Canonical pathway analysis indicated an increase in activity at days 30-31 of
655 pregnancy providing evidence of temporally and spatially regulated trophoblast
movement, distinct from invasion of the endometrium which is observed beyond day
34 of development. Signalling by Rho Family of GTPases was the most predominant
movement related pathway identified in bioinformatics analysis and functional assays
further supported a role for Rho A signalling in equine trophoblast migration. Very
660 little is known about the pathways that regulate movement of chorionic girdle
trophoblast, beyond early work that showed a role for metalloproteinases (Vagnoni,
et al. 1995). In human trophoblast, Rho A mediates EGF regulated migration (Han,
et al. 2010). Based on the induction of EGF in pregnant endometrium in mare

pregnancy (Allen *et al.* 2017), it is plausible that this molecular pathway is also
665 important for regulating trophoblast migration in the mare.

Multiple analyses suggested the Integrin signalling pathway to be activated
increasingly in the chorionic girdle between days 27 and 34 of development. Integrin
 $\alpha 2$ (*ITGA2*) expression was a top 20 upregulated gene at day 34 consistent with
previous work (Sones *et al.* 2010). Regulation of binding of collagen and laminin is a
670 well defined role of *ITGA2* and as these are also known to be expressed in mare
endometrium (Mansour *et al.* 2003). Collectively, this is supportive of a role for
integrin signalling in invasion of the maternal endometrium around day 36 of
pregnancy. Activation of ERK signalling by integrin pathways is thought to play a
major role in cell migration, through phosphorylation of myosin chains (Kumar 1998).
675 It is possible that interactions between Integrin and ERK signalling is key in co-
ordinating the differentiation and migration processes in the chorionic girdle. Whether
the trophoblasts migrate to the apices of the girdle folds to differentiate into
binucleate eCG producing cells, or they first differentiate and later gain the ability to
move towards chemotactic signals is not clear, but this co-ordinated differentiation
680 and cell movement during the development of the chorionic girdle is key and occurs
prior to acquisition of invasive potential by trophoblast between days 34 and 38 of
pregnancy.

Migration of cancer cells and progression of tumour were identified as some of the
685 top regulator effector networks in the chorionic girdle at all timepoints. Additionally,
the majority of pathways identified in KEGG pathway analysis of gene clusters 1 and
7 were also cancer signalling pathways, with 13 different cancer signalling pathways

emerging in total. Trophoblasts have been directly compared to cancer cells in their ability to proliferate, invade the maternal endometrium, establish a blood supply and moderate the maternal immune response (Reeves and James 2017). However, unlike cancer cells, chorionic girdle cells possess an unknown mechanism by which invasion is halted, upon formation of the endometrial cups. Further, chorionic girdle trophoblast senesce upon terminal differentiation, and primary cell cultures have not been maintained much beyond 180 days of culture (Allen and Moor 1972, Thway *et al.* 2001). Investigating how trophoblast cells regulate their invasion may prove highly informative not only in the field of placental biology, but also for identification of novel therapeutic targets in invasive cancers.

A number of canonical pathways involved in immune signalling were identified in analysis of the microarray data. These included CD28 signalling, Cluster of differentiation 40 (CD40) signalling and interleukin 9 (IL-9) signalling, all of which peaked in activation at day 34 of pregnancy. Previous work has shown that equine trophoblast cells are able to resist immune destruction when transplanted across allogenic barriers consistent with an inherent ability to modulate the immune response (de Mestre *et al.* 2011). IL-9 secreted by human syncytiotrophoblast have been found to play a role in regulation of integrins to promote cellular migration (Sharma *et al.* 2016). It is therefore possible that a novel role for IL-9 in regulation of endometrial invasion in the equine conceptus through either immunomodulation and/or upregulation of integrin signalling pathways has been identified here. CD40 and CD28 signalling pathways are previously undocumented in placental trophoblast cells of horse, human or mouse origin with further studies required to confirm their activity here. CD40 is commonly found on antigen presenting cells and CD28 on T-helper cells. Upregulation of these signalling pathways would be expected in the

immune cells in the maternal endometrium upon invasion by chorionic girdle trophoblasts, and further investigation of the possible activity and function of these pathways in trophoblast is warranted.

In conclusion, through analysis of microarray data using multiple pathway analysis tools, we have been able to generate an overall impression of the genes and signalling landscape in the chorionic girdle within a 7 day period significantly expanding our understanding of molecular networks in equine trophoblast. Functional assays provided further evidence suggesting roles for ELF5 in biochemical differentiation of trophoblast, Rho A in trophoblast migration and ERK1/2 activity that is likely to mediate FGF7 and EGF signalling during chorionic girdle development. Interrogation of pathway components with *in vitro* experimentation will further uncover which of these pathways are crucial for the processes of cell movement, differentiation and invasion not only allowing us to gain a more comprehensive understanding of trophoblast biology in horses but possibly informing future work in other species.

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Declaration of interest

There is no conflict of interest that could be perceived as prejudicing the impartiality
740 of the research reported.

Funding

This work was supported by the Wellcome Trust (WT98059 to AMdM and
745 WT093257MA to RCF) and Paul Mellon PhD Studentship (to AdM and RCF).

Acknowledgements

We would like to thank the Biological Services Unit at the Royal Veterinary College
and Sophie Wilford for assistance with animal care and clinical reproductive
management. Dr Daniel Hampshire, Royal Veterinary College for technical
750 assistance. Dr. Lucille Rainbow, at the Centre for Genomic Research, The University
of Liverpool, for performing the array analysis and Dr Ruby Chang for statistical
advice.

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Figure legends

Figure 1. Global changes in gene expression in the chorionic girdle (CG) and adjacent chorion (CH) between days 27 and 34 of pregnancy. Venn Diagrams showing the number of up (top number) and down (bottom number) regulated genes that changed in expression in the chorionic girdle compared day 27 chorionic girdle (A) and to the adjacent chorion (B).

Figure 2. Validation of microarray data using multiplex qRT-PCR. 8 genes selected from microarray data were validated in expression via multiplex qRT-PCR. Microarray data is plotted on the left hand axes, alongside multiplex qRT-PCR data plotted on the right hand axes of each pair of graphs. All fold changes are shown compared with day 27 chorionic girdle. (A) Genes selected for validation with an upregulation (i) 2-5 fold and (ii) >20 fold, in the chorionic girdle between days 27 and 34 of pregnancy in microarray data. (B) Genes selected for validation with a downregulation (i) 2-5 fold and (ii) >20 fold, in the chorionic girdle between days 27 and 34 of pregnancy in microarray data. (C) Gene selected with no change in the chorionic girdle between days 27 and 34 of pregnancy, based on microarray data. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$, **** $p < 0.0001$ (compared to day 27 chorionic girdle), # $p < 0.05$, ## $p < 0.01$, ### $p < 0.001$, #### $p < 0.0001$ (compared to chorion at same timepoint) (two-way ANOVA)

Figure 3. Clusters of similarly regulated genes in the chorionic girdle, identified using maSigPro software. Genes with a fold-change >2 ($P < 0.05$) between days 27 and 34 of gestation in the chorionic girdle, were grouped by maSigPro software into the 9 most likely expression profiles. Chorionic girdle is shown in red and chorion in green. Plotted is the median expression profile of genes within each cluster. Probe

numbers and corresponding gene numbers (including those unnamed genes) are provided below each cluster. Gene lists for each cluster can be found in Supplementary Table 4.

Figure 4. Activation of canonical pathways in the chorionic girdle during day 27 to 34 of pregnancy. IPA was used to identify activation or repression of canonical pathways in the chorionic girdle between days 27 and 34 of gestation. All pathways identified by the program to have an activation (Z-score) score of $>$ or $<$ 2 and $p < 0.05$ are shown with green indicating activation and red inactivation. Pathways were grouped according to known functions.

Figure 5. *ELF5* mRNA is expressed in chorionic girdle trophoblast cells, correlates with *CG/LHB* mRNA expression and drives CG/LHB promoter activity. (A) *ELF4* and *ELF5* mRNA in equine chorionic girdle and control chorion tissues at days 27, 30, 31 and 34 of gestation as shown by RT-PCR with B-actin used as a loading control. Kidney and spleen tissues are used as control. (B) Correlation between *ELF5* and *CGB* mRNA expression in individual day 30-34 equine chorionic girdle and chorion samples. Microarray expression data is normalised to the median in R software and displayed as fold change. (C) Truncated promoter inserts, as shown with annotated potential *ELF5* binding sites, were transfected into COS7 cells alone, in the presence of 150 ng pCMV-myc-Empty or 150 ng pCMV-myc-*ELF5*. Numbers are relative to Translation Start Site. Promoter activity is expressed as fold change activity over pGL3-basic alone. ** $p < 0.01$, *** $p < 0.001$. (n=3, two-way ANOVA) activity is expressed as fold change activit. over pGL3-basic alone. ** $p < 0.01$, *** $p < 0.001$. (n=3, two-way ANOVA)

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Table Legends

Table 1 Number of probes and genes differentially expressed between tissues (CH=Chorion, CG=Chorionic Girdle) and gestation day (days 27 to 34).

Table 2 Top 20 upregulated genes in the chorionic girdle at day 30, 31 and 34 all compared to day 27 chorionic girdle. Of the top 20 upregulated genes at day 31, 15 also appeared on the list for day 30. Of the top 20 genes upregulated at day 34, 10

genes appeared on the lists for day 30 or 31. * $P < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

^Unnamed gene with ensembl number. ¹Equine placenta cDNA Library Equus caballus cDNA clone HL02016B1B10, DN509596 ²Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT020024A10D12, CX599557 ³Equine placenta cDNA Library Equus caballus cDNA clone HL02019B2G06, mRNA sequence , DN510553, ⁴Equine placenta cDNA Library Equus caballus cDNA clone HL02016B1B10, mRNA sequence [DN509596], ⁵Equine placenta cDNA Library Equus caballus cDNA clone HL020001000_PLATE_E04_29_023, mRNA sequence [DN507748], ⁶Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT020021B10E08, mRNA sequence [CX598679], ⁷Equus caballus contig07293.EqcaPBMC mRNA sequence. [JL622886], ⁸Equus caballus contig05471.EqcaPBMC mRNA sequence. [JL621232], ⁹Equine placenta cDNA Library Equus caballus cDNA clone HL02014A2G04, mRNA sequence [DN508969]

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^Ensembl number listed for unnamed genes. ^Unnamed gene with ensembl number.

¹Equine placenta cDNA Library Equus caballus cDNA clone HL020010000_PLATE_G06_47_050, mRNA sequence [DN508408], ²Equine placenta cDNA Library Equus caballus cDNA clone HL02021A2F04, mRNA sequence [DN510935], ³Equine placenta cDNA Library Equus caballus cDNA clone HL02019B1D12, mRNA sequence [DN510457], ⁴Equine placenta cDNA Library Equus caballus cDNA clone HL020002000_PLATE_G01_7_004, mRNA sequence

[DN507842], ⁵Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT02041A1D02, mRNA sequence [CX605310]

Table 4 Pathways and processes enriched in gene clusters. The genes identified in maSigPro clusters 3, 4 & 5, 1 & 7 and 2 & 6 were mapped onto pathways in the KEGG and PANTHER databases. Pathways containing a minimum of 5 cluster genes ($p < 0.01$) are reported. Shown are the pathway identifiers, the number of cluster genes present in the pathway and the P-value (Fishers Exact).

Table 5 Top 5 effector networks and associated upstream regulators identified using IPA. The top 5 upregulated regulator effect networks at each time point, as compared to day 27 chorionic girdle are shown. Identified upstream regulators and their downstream cellular effects are shown, with consistency score for the pathway ($z\text{-score} > 2$, $p < 0.05$, IPA).

Supplementary figures and tables

Supplementary Figure 1. RNA Quality control. Representative set of RNA from chorionic girdle and chorion tissues analysed for RNA quality on the Agilent 2100 bioanalyser. (A) A subset of chorionic girdle (ChG) and chorion (CH) RNA samples from all time points (27-34) are shown. Arrows highlight 18S and 28S RNA bands (B) RNA quality was assessed by visualisation of the 18S and 28S bands, measured by area under the peaks.

Supplementary Figure 2. Principle component analysis (PCA) of microarray samples (A) Day 34 chorionic girdle samples clustered clearly away from the other data points with a second cluster containing day 31 and 30 chorionic girdles. Two day 27 samples clustered clearly with those from day 34 conceptuses. (B) Removal of the abnormal mare-stallion pair increased the clustering of the data. (C) Dataset key.

Supplementary Figure 3. ELF5 protein expression. Western blotting of chorionic girdle (ChG) and Chorion (CH) tissues with an anti-human ELF5 antibody. A faint protein band was seen at approximately 37kDa. (Carried out by Aviva Bioscience, San Diego, US).

Supplementary Figure 4 Validation of pCMV-myc-ELF5 expression vector in the COS7 cell line. RNA was extracted from untransfected COS7 cells and COS7 cells transfected with either pCMV-myc- Empty, pCMV-myc-ELF5. RT-PCR was carried out to determine expression of *ELF5* and *CREB3L4*. A H₂O RT-PCR control was run and *B-Actin* PCR carried out as a loading control.

Supplementary Table 1 Five mare and stallion pairs were established for breeding purposes. Over a period of two breeding seasons conceptuses were obtained at the

four timepoints of interest from each breeding pair. In cases where timepoint samples could not be obtained, tissue sets from other mares, bred with the matched stallion were used to minimise genetic variation (highlighted in yellow). Data set eliminated following microarray PCA is highlighted by red outline.

Supplementary Table 2: Primer sequences for multiplex qRT-PCR

Supplementary Table 3. List of all probes differentially expressed between time points and/or tissues.

Supplementary Table 4. List of all genes that were identified in clusters 1 to 9.

For Review Only

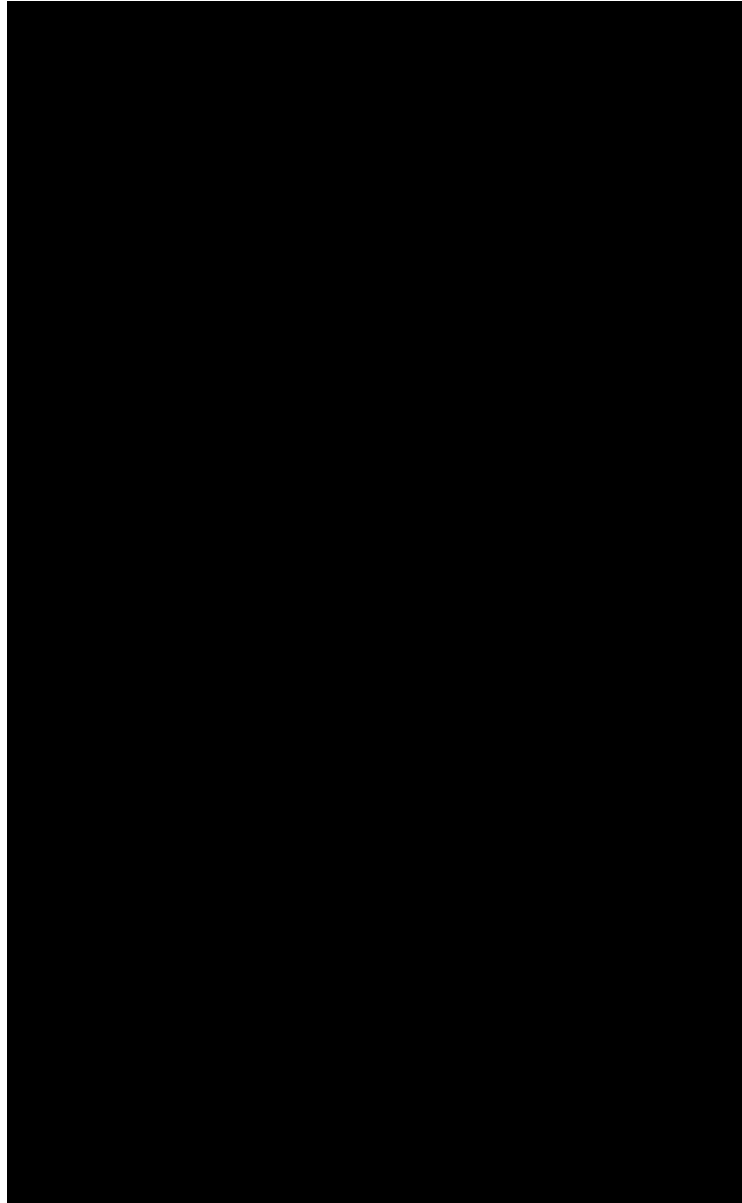


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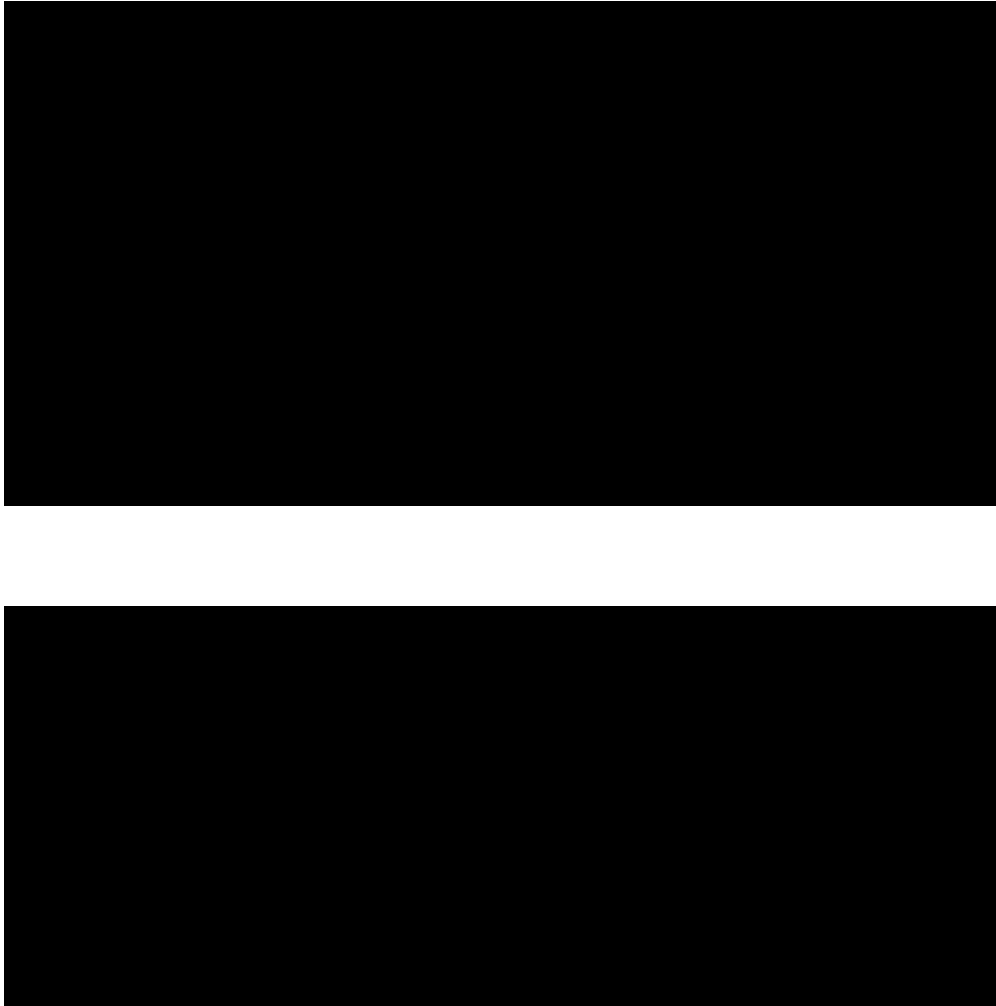


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249x250mm (150 x 150 DPI)



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159x115mm (150 x 150 DPI)



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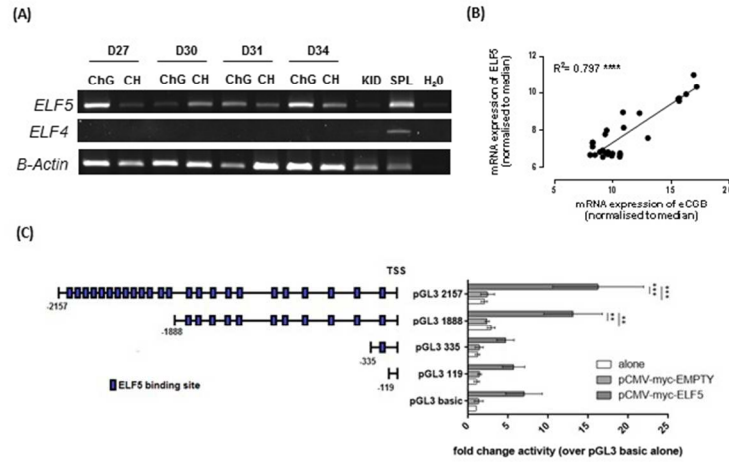


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For Review Only

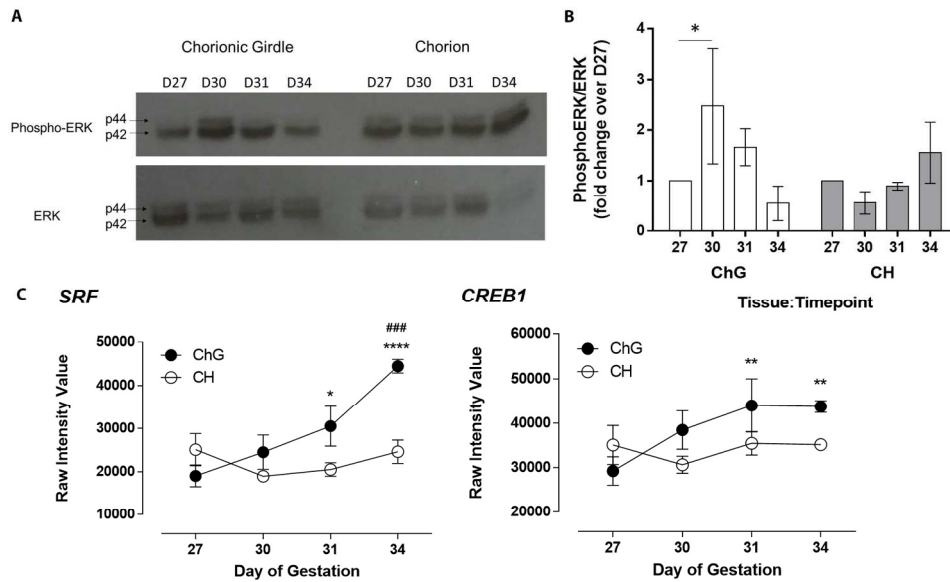


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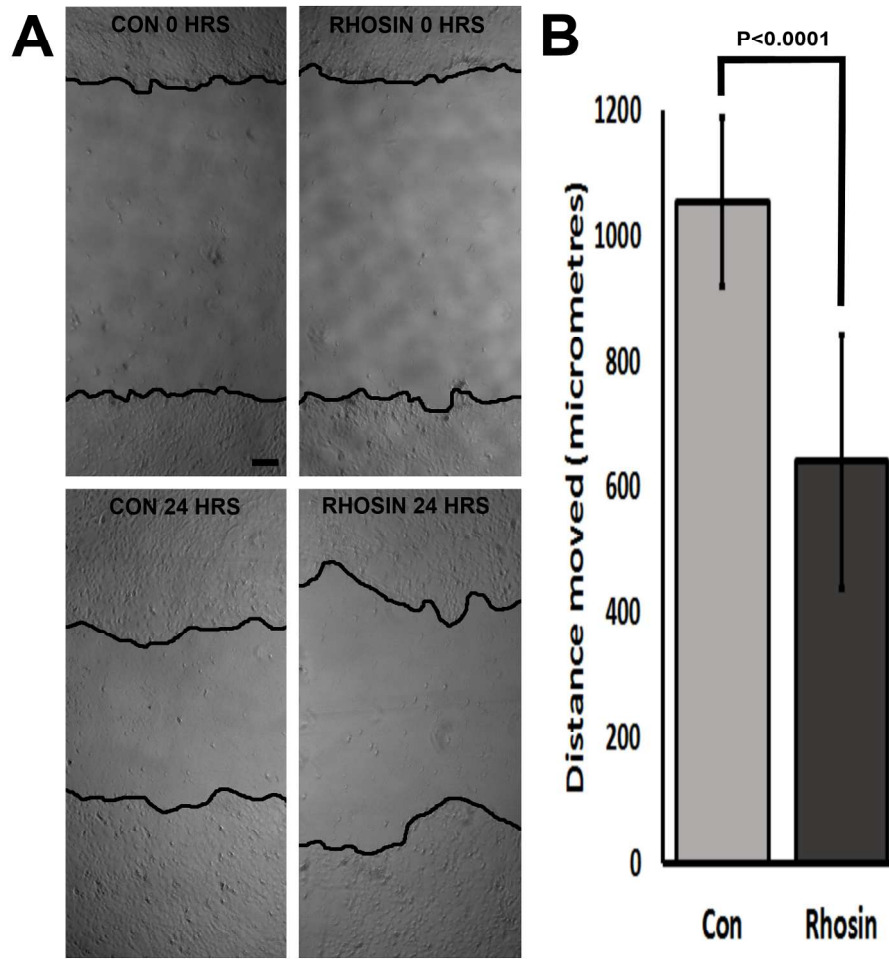


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185x200mm (300 x 300 DPI)

Table 1 Number of probes and genes differentially expressed between tissues (CH=chorion) and CG=chorionic girdle) and gestation stage (days 27 to 34).

comparison	up-regulated probes	up-regulated genes	down-regulated probes	down-regulated genes
CH_27vsCG_27	0	0	0	0
CH_27vsCH_30	0	0	0	0
CH_27vsCH_31	0	0	0	0
CH_27vsCH_34	2	2	17	9
CG_27vsCG_30	125	60	128	56
CG_27vsCG_31	370	198	239	119
CG_27vsCG_34	856	447	652	334
CH_30vsCG_30	228	123	314	167
CH_30vsCH_31	0	0	0	0
CH_30vsCH_34	0	0	0	0
CG_30vsCG_31	0	0	0	0
CG_30vsCG_34	277	160	384	207
CH_31vsCG_31	399	207	281	148
CH_31vsCH_34	0	0	0	0
CG_31vsCG_34	70	40	196	101
CH_34vsCG_34	864	442	590	312

Table 2 Top 20 upregulated genes in the chorionic girdle at day 30, 31 and 34 all compared to day 27 chorionic girdle. Of the top 20 upregulated genes at day 31, 15 also appeared on the list for day 30. Of the top 20 genes upregulated at day 34, 10 genes appeared on the lists for day 30 or 31. * P<0.05, ** p<0.01, *** p<0.001. ^Unnamed gene with ensembl number. ¹Equine placenta cDNA Library Equus caballus cDNA clone HL02016B1B10, DN509596 ²Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT020024A10D12, CX599557 ³Equine placenta cDNA Library Equus caballus cDNA clone HL02019B2G06, mRNA sequence , DN510553, ⁴Equine placenta cDNA Library Equus caballus cDNA clone HL02016B1B10, mRNA sequence [DN509596], ⁵Equine placenta cDNA Library Equus caballus cDNA clone HL020001000_PLATE_E04_29_023, mRNA sequence [DN507748], ⁶Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT020021B10E08, mRNA sequence [CX598679], ⁷Equus caballus contig07293.EqcaPBMC mRNA sequence. [JL622886], ⁸Equus caballus contig05471.EqcaPBMC mRNA sequence. [JL621232], ⁹Equine placenta cDNA Library Equus caballus cDNA clone HL02014A2G04, mRNA sequence [DN508969]

Gene Symbol [^]	Gene Function	LogFC Day 30	LogFC Day 31	LogFC Day 34
FABP4	Fatty acid binding protein	5.81310 ^{***}	7.12020 ^{****}	5.48164 ^{***}
CG	Glycoprotein hormone alpha subunit	5.24752 ^{**}	6.85655 ^{***}	8.54458 ^{****}
Unamed ¹	Unknown	4.62192 ^{**}		
BCL6	Transcription factor	4.28718 ^{***}	5.05434 ^{****}	5.70755 ^{****}
SBSPON	Scavenger receptor activity	4.14721 ^{**}	5.04306 ^{***}	5.67806 ^{****}
ENSECAT00000017968	Uncharacterised protein	3.61386 ^{**}	4.59892 ^{****}	
FFAR2	G-protein coupled receptor	3.36892 [*]	5.03815 ^{***}	6.84478 ^{****}
FGF7	Epithelial cell-specific growth factor	3.35574 ^{***}	4.99731 ^{****}	
Unamed ²	Unknown	3.27125 ^{**}	4.00893 ^{****}	4.90052 ^{****}
PSMB9	Proteasome subunit	3.21874 ^{**}	4.40427 ^{****}	5.09380 ^{****}
ENSECAT00000015366	Uncharacterised protein	2.91600 ^{***}	3.80865 ^{****}	
PLAC9	Placenta specific gene	2.88399 ^{**}	4.03647 ^{****}	
CXCL14	Cytokine	2.82875 ^{**}		
CCNB1	Regulatory protein involved in mitosis	2.77803 ^{**}		
ARG2	Arginase activity	2.76454 ^{***}		
MYBL2	Transcription factor	2.66493 ^{**}		
RRM2	Ribonucleotide reductase	2.64996 ^{**}	3.27003 ^{***}	
Unamed ³	Unknown	2.58010 [*]	3.43442 ^{***}	5.48339 ^{****}
SERPINE2	Inhibitor of serine protease	2.52432 [*]	3.32343 ^{**}	5.53857 ^{****}
GCM1	Transcription factor	2.44777 [*]	3.51574 ^{***}	
Unamed ⁴	Unknown		4.93379 ^{***}	
Unamed ⁵	Unknown		3.51056 ^{***}	5.97793 ^{****}
FAM227B	Transcription factor		3.31251 ^{****}	
MHC Class I	Central role in the immune system		3.23287 ^{***}	
TAF4B	Selective coactivator of transcription		3.20532 ^{****}	
TCN1	Vitamin B-12 binding protein			8.97029 ^{****}
LAMB3	Basement membrane protein			7.03224 ^{****}
Unamed ⁶	Unknown			6.30324 ^{****}
ENSECAT00000001317	Known protein coding			6.09937 ^{****}
Unamed ⁷	Unknown			5.95520 ^{****}
ITGA2	Transmembrane receptor subunit			5.79772 ^{****}
CADM1	Cell adhesion molecule			5.30317 ^{****}
Unamed ⁸	Unknown			4.92632 ^{****}
Unamed ⁹	Unknown			4.89318 ^{****}
CGB	Chorionic gonadotrophin B-subunit			6.52371 ^{****}

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Gene Symbol [^]	Gene Function	LogFC Day 30	LogFC Day 31	LogFC Day 34
FABP1	Fatty acid binding protein	3.42092 ^{****}		
GPR162	G protein-coupled receptor	3.41190 ^{****}		
PTGS2	Enzyme for prostaglandin synthesis	3.33766 ^{****}	3.98743 ^{***}	4.98492 ^{****}
RDH16L	Enzyme, retinol dehydrogenase	3.26851 ^{****}	4.19061 ^{****}	4.88511 ^{****}
IL1B	Cytokine	3.25615 ^{****}	4.55809 ^{**}	4.92065 ^{**}
Unnamed ¹	Unknown	3.19614 ^{****}	5.10370 ^{****}	6.14734 ^{****}
Unnamed ²	Unknown	3.16932 ^{****}	4.18707 ^{****}	4.69047 ^{****}
ENSECAT00000022537	Uncharacterised protein	3.15012 ^{****}	4.21925 ^{****}	5.01506 ^{****}
ENSECAT0000007031	Uncharacterised protein	3.00171 ^{****}		
ACTG2	Cytoskeletal protein	3.00165 ^{****}		
FMO1	Oxioreductase	2.89347 ^{**}	3.89842 ^{****}	4.87058 ^{****}
CA7	Reversible hydration of CO ₂	2.83819 ^{****}	3.84538 ^{****}	
HSD3B1	Bifunctional enzyme	2.75848 ^{****}		
ENSECAT00000019764	Uncharacterised protein	2.63330 ^{****}	3.64952 ^{****}	
APL1	membrane-associated glycoprotein	2.61260 ^{****}	4.56274 ^{****}	4.66107 ^{****}
ENSECAT00000020332	Uncharacterised protein	2.54894 ^{****}		
LGMN	Enzyme, cysteine protease	2.52946 ^{****}		
MT	Golgi localised protein	2.51741 ^{****}		
ENSECAT00000021165	Uncharacterised protein	2.50448 ^{****}	3.54138 ^{****}	
CYP17A1	Enzyme, cytokine p450	2.50254 ^{****}	3.70293 ^{****}	4.89858 ^{****}
Unnamed ³	Unknown		4.11917 ^{****}	
TAGLN3	Actin filament binding		4.11782 ^{****}	5.72992 ^{****}
LHFPL1	Transmembrane protein		4.01210 ^{**}	5.24291 ^{****}
ENSECAT00000024713	Uncharacterised protein		3.74453 ^{**}	5.23593 ^{****}
CPVL	Carboxypeptidase		3.73216 ^{**}	5.52317 ^{****}
PLXNB1	Regulation of actin cytoskeleton		3.64882 ^{****}	
ENSECAT00000016216	Uncharacterised protein		3.64030 ^{****}	4.73441 ^{****}
ENSECAT0000006927	Uncharacterised protein			5.32239 ^{****}
SLC46A1	Transmembrane folate transporter			5.05205 ^{****}
Unnamed ⁴	Unknown			5.02691 ^{****}
Unnamed ⁵	Unknown			4.78917 ^{****}
CA4	Reversible hydration of CO ₂			4.69078 ^{****}
PLA2G10	Enzyme, phospholipase			4.57344 ^{****}

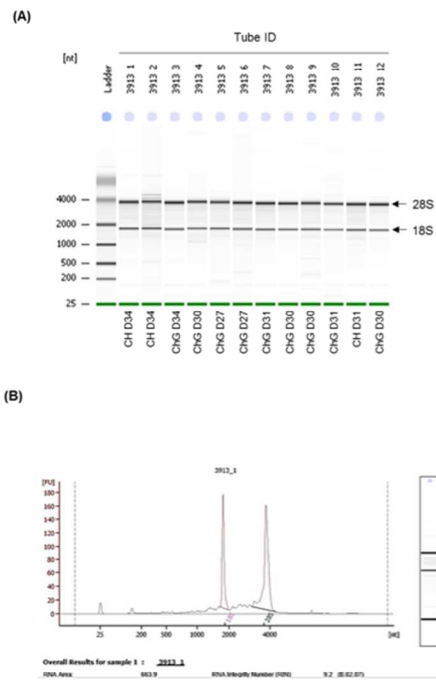
Table 4 Pathways and processes enriched in gene clusters. The genes identified in maSigPro clusters 3, 4 & 5, 1 & 7 and 2 & 6 were mapped onto pathways in the KEGG and PANTHER databases. Pathways containing a minimum of 5 cluster genes ($p < 0.01$) were considered biologically relevant. Shown are the pathway identifiers, the number of cluster genes present in the pathway and the P-value (Fishers Exact).

Term	No. of Genes	P value
Cluster 3		
Spliceosome	5	0.00016
Clusters 4 & 5		
Lysosome	13	0.00110
Cytoskeletal Regulation by Rho GTPase	9	0.00610
Pathogenic Escherichia Coli infection	8	0.00230
Ether lipid metabolism	6	0.00290
Clusters 1 & 7		
Pathways in cancer	22	0.00002
Integrin signalling pathway	22	0.00000
Inflammation mediated by chemokine and cytokine signalling pathway	21	0.00007
Focal adhesion	19	0.00000
Regulation of actin cytoskeleton	17	0.00003
Angiogenesis	14	0.00320
PDGF signalling pathway	13	0.00140
Chemokine signalling pathway	12	0.00260
Neurotrophin signalling pathway	12	0.00006
EGF signalling pathway	11	0.00180
Cytoskeletal regulation by Rho GTPase	10	0.00083
VEGF signalling pathway	10	0.00005
Small cell lung cancer	10	0.00004
Renal cell carcinoma	10	0.00001
Tight junction	9	0.00660
Endothelin signalling pathway	9	0.00110
Prostate Cancer	9	0.00038
Chronic Myeloid Leukaemia	9	0.00010
T cell receptor signalling pathway	8	0.00580
Fc gamma R-mediated phagocytosis	8	0.00260
Insulin signalling pathway	8	0.00210
ErbB signalling pathway	7	0.00620
Progesterone mediated oocyte maturation	7	0.00590
ECM-receptor interaction	7	0.00510
Colorectal cancer	7	0.00510
Fc epsilon RI signalling pathway	7	0.00340
Pancreatic Cancer	7	0.00210
Melanoma	7	0.00200
Glioma	7	0.00097
Acute myeloid leukaemia	7	0.00059
Endometrial Cancer	7	0.00030
Valine, leucine and isoleucine degradation	7	0.00010
p53 pathway feedback loops 2	6	0.00750
Non-small cell lung cancer	6	0.00230
Bladder cancer	6	0.00059
Glycerolipid metabolism	5	0.00530
Thyroid cancer	5	0.00071
Clusters 2 & 6		
Focal Adhesion	16	0.00001
Chemokine signalling pathway	11	0.00410
Adherens junction	10	0.00001
Tight junction	10	0.00110
Histamine H1 receptor mediated signalling pathway	6	0.00076
Vibrio cholera infection	5	0.00950
GABA-B receptor II signalling	5	0.00350

Table 5 Top 5 effector networks and associated upstream regulators identified using IPA. The top 5 upregulated regulator effect networks at each time point, as compared to day 27 chorionic girdle are shown. Identified upstream regulators and their downstream cellular effects are shown, with consistency score for the pathway (z-score>2, p<0.05, IPA).

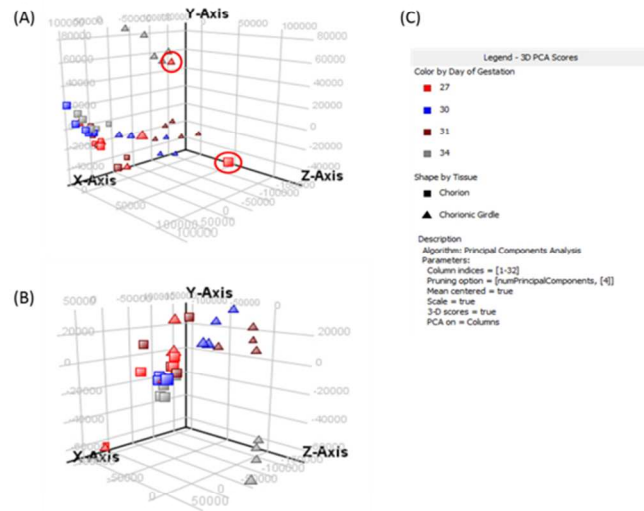
Day of Gestation	Top upregulated upstream regulators (vs.D27 ChG)	functions of regulated effector networks	consistency score
D30	1 GLIS2, IgG, IHH,MAP2K1, MAP2K1/2, MAP2K3, miR141-3p, PTHLH	Cell movement of tumour cells	8.485
	2 Akt, CTNNB1, ERK, ETV4,Histone H3, PRKCZ	Failure of kidney, glomerulosclerosis	7.778
	3 ETV4, PML, SDCBP, TBX3, TFEB	Accumulation of lipid, cell movement of tumour cells, blood vessel development	6.306
	4 ETV4, SP11, TLR4	Cell movement of tumour cells, fibrosis of kidney, urinary system morphology	6.062
	5 E2f, EP400, LYL1, RAF1, TBX2, TFDP1	Size of animal, size of embryo	5.277
D31	1 BGN, ETV4, ETV5, GLIS1, HNRNPAB, MAP2K1/2, PLCD1, PTHLH, SOCS1, SRC(family)	Migration of cancer cells	11.250
	2 AHR, BMP3L, CCND1, E2F2, E2F6, EIF4G1, let-7, PPM1D, RBL1, STUB1, TBX2	Repair of DNA, S phase checkpoint control	9.922
	3 E2f, EP400, Pka, TBX2, TFDP1	Proliferation of heart cells, size of embryo, quantity of brain cells	4.750
	4 CDKN1A, E2F1, HDAC1, let-7, mir-10, miR16-5p, Rb, TBX2	S phase checkpoint control	4.596
	5 HNRNPAB, MAP3KB, NOS2, POU5F1, SATB1, SPDEF	Progression of tumour	3.273
D34	1 APC, ETV4, ETV5, GLIS2, MAP3K8, PLCD1, SPARC, WISP2	Cell movement of lymphocytes, migration of cancer cells	10.800
	2 BMP15, BMPR1A, HNRNPAB, PLA2G5, TBX5	Angiogenesis, cell movement of lymphocytes, colony formation of cells movement of cancer cells, proliferation of muscle cells	9.865
	3 GLIS2, MAP2K1/2, PLCD1, SMAD3, SRC family, TGFB3, WISP2	Migration of tumour cells	8.014
	4 CCND1, E2F2, E2F6, EIF4G1, let-7, PPM1D, RBL1, STUB1, TBX2	Repair of DNA, S phase checkpoint control	7.649
	5 Akt, CDKN1A, E2F1, FGF2, HDAC1, let-7, mir-10, miR125b-5p, miR16-5p, PTEN, Rb, TBX2	S phase checkpoint control	5.303

Supplementary Figure 1 Representative set of RNA from chorionic girdle and chorion tissues analysed for RNA quality on the Agilent 2100 bioanalyser. (A) A subset of chorionic girdle (ChG) and chorion (CH) RNA samples from all time points (27-34) are shown. Arrows highlight 18S and 28S RNA bands (B) RNA quality was assessed by visualisation of the 18S and 28S bands, measured by area under the peaks.



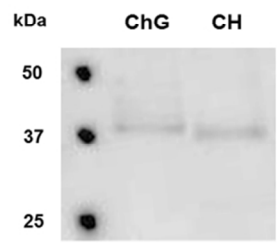
190x275mm (96 x 96 DPI)

Supplementary Figure 2: Principle component analysis (PCA) of microarray samples (A) Day 34 chorionic girdle samples clustered clearly away from the other data points with a second cluster containing day 31 and 30 chorionic girdles. Two day 27 samples clustered clearly with those from day 34 conceptuses. (B) Removal of the abnormal mare-stallion pair increased the clustering of the data. (C) Dataset key



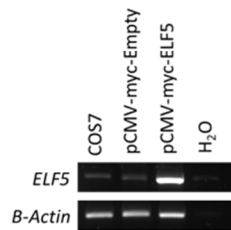
190x275mm (96 x 96 DPI)

Supplementary Figure 3 Protein expression of ELF5 in the chorionic girdle. Western blotting of day 34 chorionic girdle (ChG) and Chorion (CH) tissues with an anti-human ELF5 antibody. A faint protein band was seen at approximately 37kDa. (Carried out by Aviva Bioscience, San Diego, US).



190x275mm (96 x 96 DPI)

Supplementary Figure 4 Validation of pCMV-myc-ELF5 expression vector in the COS7 cell line. RNA was extracted from untransfected COS7 cells and COS7 cells transfected with either pCMV-myc- Empty, pCMV-myc-ELF5. RT-PCR was carried out to determine expression of *ELF5* and *CREB3L4*. A H₂O RT-PCR control was run and *B-Actin* PCR carried out as a loading control.



190x275mm (96 x 96 DPI)

Supplementary Table 1 Five mare and stallion pairs were established for breeding purposes. Over a period of two breeding seasons conceptuses were obtained at the four timepoints of interest from each breeding pair. In cases where timepoint samples could not be obtained, tissue sets from other mares, bred with the matched stallion were used to minimise genetic variation (highlighted in yellow).

Mare	Stallion	Sample set Number			
		Day 27	Day 30	Day 31	Day 34
M1	S1	1213	1209	1204	1305
M2	S1	1214	1311	1205	1303
M3	S1	1307	1203	1310	1216
M4	S2	1201	1210	1207	1304
M5	S2	1306	1309	1212	1211

Supplementary Table 2: Primer sequences for multiplex qRT-PCR

Gene	Product Size	Forward Primer	Reverse Primer
<i>CREB3L4</i>	137	AGGTGACACTATAGAATACCAGCTGTAGAGCCCATCTC	GTACGACTCACTATAGGGACATGAGCATCAAGGTGCAGT
<i>NKX2-5</i>	144	AGGTGACACTATAGAATAACAACCTTCGTGAACTTCGGC	GTACGACTCACTATAGGGACTACCAGGCTCGGATACCGT
<i>GAPDH</i>	151	AGGTGACACTATAGAATACCTGGGCTACACTGAGGAC	GTACGACTCACTATAGGGATGAGCTTGACAAAAGTGGTCCG
<i>FOXP1</i>	165	AGGTGACACTATAGAATAGCCTAAAGAGCAACAGCAGG	GTACGACTCACTATAGGGACCGGCTGAATTGTTAGAAGG
<i>CYP7A1</i>	172	AGGTGACACTATAGAATATGACAAAATCTTTCCAGCCC	GTACGACTCACTATAGGGAACCAGTCCGAGATGTGGTC
<i>SMAD7</i>	179	AGGTGACACTATAGAATACGCTGTTGGTACACAAGGTG	GTACGACTCACTATAGGGATTACGAAGCTGATCTGCAC
<i>PAX6</i>	186	AGGTGACACTATAGAATACAATCAAAACGTGTCCAACG	GTACGACTCACTATAGGGAACTCCCGCTTATACTGGGCT
<i>S100A12</i>	193	AGGTGACACTATAGAATAAGATGGCCAGGTCAGCTTTA	GTACGACTCACTATAGGGAGTCTGGGCTTTGATGAGGAG
<i>KLF10</i>	200	AGGTGACACTATAGAATAGACCGATTGGAAGGTGAAGA	GTACGACTCACTATAGGGAGCTTGTCACTAACCCAGGC
<i>SDHA</i>	207	AGGTGACACTATAGAATAGGGAACATGGAAGAGGACAA	GTACGACTCACTATAGGGAATCCTCCCATCTTCGGTTCT
<i>ELF5</i>	214	AGGTGACACTATAGAATAGATGTGGGGACAGAGGAAGA	GTACGACTCACTATAGGGACTTGATGACGGAGCAGATCA
<i>SREBF1</i>	221	AGGTGACACTATAGAATACACTCGTCTTCTCTGCCTC	GTACGACTCACTATAGGGATTAGTCAGCCAGATCAGGGG
<i>NXF1</i>	229	AGGTGACACTATAGAATAGCGTGGCTCCTAAGTGTGAT	GTACGACTCACTATAGGGAGGAACAGAGGCGTTGATGAT
<i>SRF</i>	236	AGGTGACACTATAGAATAACGACCTTCAGCAAGAGGAA	GTACGACTCACTATAGGGAGAGAGTCTGGCGAGTTGAGG
<i>CREB1</i>	243	AGGTGACACTATAGAATAGAATGTTCCAACACCTGCCT	GTACGACTCACTATAGGGATGTCCTAAGGCAATCAAGG
<i>ELF4</i>	250	AGGTGACACTATAGAATACCAGTTAAGGAGATGCCCA	GTACGACTCACTATAGGGATGAAGACCAACGTGCTGAAC
<i>KAN</i>	325	AGGTGACACTATAGAATAATCATCAGCATTGCATTCCGTTTGG	GTACGACTCACTATAGGGAAATCCGACTCGTCCAACATC

Supplementary Table 3. List of all differentially expressed probes

<i>ProbeName</i>	<i>GeneName</i>	<i>GeneSymbol</i>	<i>SystematicName</i>
A_69_P000001	ANXA1	ANXA1	NM_001081867
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A_69_P000076	HSD3B1	HSD3B1	NM_001081911
A_69_P000096	CYP11A1	CYP11A1	NM_001082521
A_69_P000097	CYP11A1	CYP11A1	NM_001082521
A_69_P000098	CYP11A1	CYP11A1	NM_001082521
A_69_P000099	CYP11A1	CYP11A1	NM_001082521
A_69_P000100	CYP11A1	CYP11A1	NM_001082521
A_69_P000121	CG	CG	NM_001099763
A_69_P000122	CG	CG	NM_001099763
A_69_P000123	CG	CG	NM_001099763
A_69_P000124	CG	CG	NM_001099763
A_69_P000125	CG	CG	NM_001099763
A_69_P000191	CAV2	CAV2	NM_001114144
A_69_P000192	CAV2	CAV2	NM_001114144
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A_69_P000259	RBP4	RBP4	NM_001081951
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A_69_P000336	TSG-6	TSG-6	NM_001081906
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A_69_P000426	CYP19A1	CYP19A1	NM_001081805
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A_69_P002618	COL12A1	COL12A1	ENSECAT00000027086
A_69_P002619	COL12A1	COL12A1	ENSECAT00000027086

A_69_P002620	COL12A1	COL12A1	ENSECAT00000027086
A_69_P002646	FN1	FN1	ENSECAT00000007204
A_69_P002651	IGFBP2	IGFBP2	ENSECAT00000012491
A_69_P002656	IGFBP-5	IGFBP-5	ENSECAT00000014055
A_69_P002657	IGFBP-5	IGFBP-5	ENSECAT00000014055
A_69_P002658	IGFBP-5	IGFBP-5	ENSECAT00000014055
A_69_P002659	IGFBP-5	IGFBP-5	ENSECAT00000014055
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A_69_P002676	PER2	PER2	ENSECAT00000014506
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A_69_P002678	PER2	PER2	ENSECAT00000014506
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A_69_P002841	LOC100056371	GLB1	ENSECAT00000013017
A_69_P002886	ACTG2	ACTG2	ENSECAT00000020181
A_69_P002887	ACTG2	ACTG2	ENSECAT00000020181
A_69_P002888	ACTG2	ACTG2	ENSECAT00000020181
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A_69_P003281	SELENBP1	SELENBP1	ENSECAT00000019513
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A_69_P028176	ENSECAT00000	HOMER3	ENSECAT00000024809
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A_69_P056432	KIF15	KIF15	ENSECAT00000016447
A_69_P056621	ENTPD3	ENTPD3	ENSECAT00000018886
A_69_P056781	LRRFIP2	LRRFIP2	ENSECAT00000022910
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A_69_P057506	LOC100062216	PCOLCE2	ENSECAT00000021960
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A_69_P057532	PLOD2	PLOD2	ENSECAT00000010371
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A_69_P057632	ENSECAT00000	PFN2	ENSECAT00000026660
A_69_P057633	ENSECAT00000	PFN2	ENSECAT00000026660
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A_69_P062486	KIF20A	KIF20A	ENSECAT00000018112
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A_69_P067132	CNDP2	CNDP2	ENSECAT00000020236
A_69_P067133	CNDP2	CNDP2	ENSECAT00000020236

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A_69_P074046	LOC100052032	LOC100052032	ENSECAT00000019326
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A_69_P125531	LOC100066043	LOC100066043	ENSECAT00000010408
A_69_P125532	LOC100066043	LOC100066043	ENSECAT00000010408
A_69_P125533	LOC100066043	LOC100066043	ENSECAT00000010408
A_69_P125534	LOC100066043	LOC100066043	ENSECAT00000010408
A_69_P125535	LOC100066043	LOC100066043	ENSECAT00000010408
A_69_P125696	LOC100068438	LOC100068438	ENSECAT00000009098
A_69_P125791	GZMB	GZMB	NM_001081881
A_69_P125931	ENSECAT00000	AIF1	ENSECAT00000029007
A_69_P126352	ENSECAT00000	ENSECAT00000023	ENSECAT00000023756
A_69_P126353	ENSECAT00000	ENSECAT00000023	ENSECAT00000023756
A_69_P126354	ENSECAT00000	ENSECAT00000023	ENSECAT00000023756
A_69_P126355	ENSECAT00000	ENSECAT00000023	ENSECAT00000023756
A_69_P126412	JL616549	JL616549	JL616549
A_69_P126796	LOC100053020	GHR	ENSECAT00000003842
A_69_P127146	LOC100064796	GSTA1	XM_001498703
A_69_P127441	A_69_P127441	A_69_P127441	A_69_P127441
A_69_P127531	ENSECAT00000	ENSECAT00000023	ENSECAT00000023863
A_69_P127966	A_69_P127966	A_69_P127966	A_69_P127966
A_69_P128611	JL637396	JL637396	JL637396
A_69_P128946	JL617387	JL617387	JL617387
A_69_P128951	SEPP1	SEPP1	NM_001135605
A_69_P128952	SEPP1	SEPP1	NM_001135605
A_69_P128966	LOC100059727	LOC100059727	XM_001915199
A_69_P129086	LOC100059922	CLDN3	XR_131483
A_69_P129542	LOC100059209	LOC100059209	XM_001916129
A_69_P129616	JL638119	JL638119	JL638119
A_69_P129691	JL640507	JL640507	JL640507
A_69_P129696	A_69_P129696	A_69_P129696	A_69_P129696
A_69_P129711	JL641608	JL641608	JL641608
A_69_P129766	DN509087	DN509087	DN509087
A_69_P129771	DN510160	DN510160	DN510160
A_69_P129772	DN510160	DN510160	DN510160
A_69_P129776	DN509702	AGR3	DN509702
A_69_P129777	DN509702	AGR3	DN509702
A_69_P129796	TCN1	TCN1	XM_001501422

A_69_P129797	TCN1	TCN1	XM_001501422
A_69_P129821	XM_001916168	XM_001916168	XM_001916168

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Gene Description

ref|Equus caballus annexin A1 (ANXA1), mRNA [NM_001081867]
ref|Equus caballus annexin A1 (ANXA1), mRNA [NM_001081867]
ref|Equus caballus MHC class I antigen 9.2 (LOC100056062), mRNA [NM_001123381]
ref|Equus caballus hydroxy-delta-5-steroid dehydrogenase, 3 beta- and steroid delta-isomerase 1 (HSD3B1), mRNA
ref|Equus caballus cytochrome P450 cholesterol side-chain cleavage (CYP11A1), nuclear gene encoding mitochondri
ref|Equus caballus cytochrome P450 cholesterol side-chain cleavage (CYP11A1), nuclear gene encoding mitochondri
ref|Equus caballus cytochrome P450 cholesterol side-chain cleavage (CYP11A1), nuclear gene encoding mitochondri
ref|Equus caballus cytochrome P450 cholesterol side-chain cleavage (CYP11A1), nuclear gene encoding mitochondri
ref|Equus caballus gonadotropin alpha 1subunit (CG), mRNA [NM_001099763]
ref|Equus caballus gonadotropin alpha 1subunit (CG), mRNA [NM_001099763]
ref|Equus caballus gonadotropin alpha 1subunit (CG), mRNA [NM_001099763]
ref|Equus caballus gonadotropin alpha 1subunit (CG), mRNA [NM_001099763]
ref|Equus caballus gonadotropin alpha 1subunit (CG), mRNA [NM_001099763]
ref|Equus caballus caveolin 2 (CAV2), mRNA [NM_001114144]
ref|Equus caballus caveolin 2 (CAV2), mRNA [NM_001114144]
ref|Equus caballus retinol binding protein 4, plasma (RBP4), mRNA [NM_001081951]
ref|Equus caballus retinol binding protein 4, plasma (RBP4), mRNA [NM_001081951]
ref|Equus caballus retinol binding protein 4, plasma (RBP4), mRNA [NM_001081951]
ref|Equus caballus retinol binding protein 4, plasma (RBP4), mRNA [NM_001081951]
ref|Equus caballus monoamine oxidase B (MAOB), nuclear gene encoding mitochondrial protein, mRNA [NM_001
ref|Equus caballus monoamine oxidase B (MAOB), nuclear gene encoding mitochondrial protein, mRNA [NM_001
ref|Equus caballus P450 (cytochrome) oxidoreductase (POR), mRNA [NM_001122655]
ref|Equus caballus tumor necrosis factor alpha-induced protein 6 (TSG-6), mRNA [NM_001081906]
ref|Equus caballus 7-51 putative nonclassical MHC class I antigen (LOC100051657), mRNA [NM_001099765]
ref|Equus caballus MHC class I heavy chain (MHCX1), mRNA [NM_001099766]
ref|Equus caballus biglycan (BGN), mRNA [NM_001081839]
ref|Equus caballus inhibin, beta A (INHBA), mRNA [NM_001081909]
ref|Equus caballus inhibin, beta A (INHBA), mRNA [NM_001081909]
ref|Equus caballus inhibin, beta A (INHBA), mRNA [NM_001081909]
ref|Equus caballus cytochrome P450, family 19, subfamily A, polypeptide 1 (CYP19A1), mRNA [NM_001081805]
ref|Equus caballus beta-2-microglobulin (B2M), mRNA [NM_001082502]
ref|Equus caballus beta-2-microglobulin (B2M), mRNA [NM_001082502]
ref|Equus caballus hydroxysteroid (17-beta) dehydrogenase 1 (HSD17B1), mRNA [NM_001083598]
ref|Equus caballus GM2 ganglioside activator (GM2A), mRNA [NM_001081912]
ref|Equus caballus S100 calcium binding protein G (S100G), mRNA [NM_001081890]
ref|Equus caballus S100 calcium binding protein G (S100G), mRNA [NM_001081890]
ref|Equus caballus S100 calcium binding protein G (S100G), mRNA [NM_001081890]
ref|Equus caballus S100 calcium binding protein G (S100G), mRNA [NM_001081890]
ref|Equus caballus S100 calcium binding protein G (S100G), mRNA [NM_001081890]
ref|Equus caballus phospholipase A2, group IVA (cytosolic, calcium-dependent) (PLA2G4A), mRNA [NM_00108184
ref|Equus caballus phospholipase A2, group IVA (cytosolic, calcium-dependent) (PLA2G4A), mRNA [NM_00108184
ref|Equus caballus glutathione peroxidase 3 (plasma) (GPX3), mRNA [NM_001115158]

ref|Equus caballus tumor necrosis factor receptor superfamily, member 14 (TNFRSF14), mRNA [NM_001081907]
ref|Equus caballus cytochrome P-450 17 alpha-hydroxylase/C17,20-lyase (CYP17A1), mRNA [NM_001082523]
ref|Equus caballus cytochrome P-450 17 alpha-hydroxylase/C17,20-lyase (CYP17A1), mRNA [NM_001082523]
ref|Equus caballus granzyme B (granzyme 2, cytotoxic T-lymphocyte-associated serine esterase 1) (GZMB), mRNA
ref|Equus caballus eprorelaxin (RLN), mRNA [NM_001081809]
ref|Equus caballus inducible nitric oxide synthase (INOS), mRNA [NM_001081769]
ref|Equus caballus inducible nitric oxide synthase (INOS), mRNA [NM_001081769]
ref|Equus caballus inducible nitric oxide synthase (INOS), mRNA [NM_001081769]
ref|Equus caballus inducible nitric oxide synthase (INOS), mRNA [NM_001081769]
ref|Equus caballus inducible nitric oxide synthase (INOS), mRNA [NM_001081769]
ref|Equus caballus MHC class I heavy chain (MHCB3), mRNA [NM_001082508]
ref|Equus caballus vascular endothelial growth factor A (VEGFA), mRNA [NM_001081821]
ref|Equus caballus vascular endothelial growth factor A (VEGFA), mRNA [NM_001081821]
ref|Equus caballus vascular endothelial growth factor A (VEGFA), mRNA [NM_001081821]
ref|Equus caballus vascular endothelial growth factor A (VEGFA), mRNA [NM_001081821]
ref|Equus caballus vascular endothelial growth factor A (VEGFA), mRNA [NM_001081821]
ref|Equus caballus solute carrier family 26 (sulfate transporter), member 2 (SLC26A2), mRNA [NM_001081934]
ref|Equus caballus solute carrier family 26 (sulfate transporter), member 2 (SLC26A2), mRNA [NM_001081934]
ref|Equus caballus solute carrier family 2 (facilitated glucose transporter), member 4 (SLC2A4), mRNA [NM_001081934]
ref|Equus caballus alpha-1-antitrypsin (SPI2), mRNA [NM_001114533]
ref|Equus caballus prostaglandin-endoperoxide synthase 2 (prostaglandin G/H synthase and cyclooxygenase) (PTC
ref|Equus caballus prostaglandin-endoperoxide synthase 2 (prostaglandin G/H synthase and cyclooxygenase) (PTC
ref|Equus caballus transgelin (TAGLN), mRNA [NM_001110134]
ref|Equus caballus solute carrier organic anion transporter family, member 2B1 (SLCO2B1), mRNA [NM_001081780]
ref|Equus caballus hemoglobin, zeta (HBZ1), mRNA [NM_001114542]
ref|Equus caballus clusterin (CLU), mRNA [NM_001081944]
ref|Equus caballus S100 calcium binding protein A6 (S100A6), mRNA [NM_001081841]
ref|Equus caballus S100 calcium binding protein A6 (S100A6), mRNA [NM_001081841]
ref|Equus caballus S100 calcium binding protein A6 (S100A6), mRNA [NM_001081841]
ref|Equus caballus S100 calcium binding protein A6 (S100A6), mRNA [NM_001081841]
ref|Equus caballus S100 calcium binding protein A6 (S100A6), mRNA [NM_001081841]
ref|Equus caballus transferrin (TF), mRNA [NM_001081946]
ref|Equus caballus hemoglobin, alpha 2 (HBA2), mRNA [NM_001085431]
ref|Equus caballus hyaluronan and proteoglycan link protein 1 (HAPLN1), mRNA [NM_001082504]
ref|Equus caballus hyaluronan and proteoglycan link protein 1 (HAPLN1), mRNA [NM_001082504]
ref|Equus caballus alpha-fetoprotein (AFP), mRNA [NM_001081952]
ref|Equus caballus mast cell protease-1-like (LOC100033969), mRNA [NM_001081876]
ref|Equus caballus fibromodulin (FMOD), mRNA [NM_001081777]
ref|Equus caballus fibromodulin (FMOD), mRNA [NM_001081777]
ref|Equus caballus testis derived transcript (3 LIM domains) (TES), mRNA [NM_001114149]
ref|Equus caballus met proto-oncogene (hepatocyte growth factor receptor) (MET), mRNA [NM_001114147]
ref|Equus caballus lumican (LUM), mRNA [NM_001081780]
ens|aquaporin 5 [Source:HGNC Symbol;Acc:638] [ENSECAT00000008610]
ref|Equus caballus MHC class II DQ-alpha chain (DQA), mRNA [NM_001128593]
ref|Equus caballus MHC Class I heavy chain (MHCB1), mRNA [NM_001082505]
ref|Equus caballus deoxyribonuclease I (DNASE1), mRNA [NM_001082514]
ref|Equus caballus deoxyribonuclease I (DNASE1), mRNA [NM_001082514]

ref|Equus caballus deoxyribonuclease I (DNASE1), mRNA [NM_001082514]
ref|Equus caballus deoxyribonuclease I (DNASE1), mRNA [NM_001082514]
ref|Equus caballus deoxyribonuclease I (DNASE1), mRNA [NM_001082514]
ref|Equus caballus lymphocyte antigen 96 (LY96), mRNA [NM_001081898]
ref|Equus caballus lymphocyte antigen 96 (LY96), mRNA [NM_001081898]
ref|Equus caballus lipopolysaccharide-induced TNF factor (LITAF), mRNA [NM_001081861]
ref|Equus caballus chemokine (C-C motif) ligand 2 (CCL2), mRNA [NM_001081931]
ref|Equus caballus chemokine (C-C motif) ligand 2 (CCL2), mRNA [NM_001081931]
ref|Equus caballus chemokine (C-C motif) ligand 2 (CCL2), mRNA [NM_001081931]
ref|Equus caballus chemokine (C-C motif) ligand 2 (CCL2), mRNA [NM_001081931]
ref|Equus caballus chemokine (C-C motif) ligand 2 (CCL2), mRNA [NM_001081931]
ref|Equus caballus chemokine (C-C motif) ligand 8 (CCL8), mRNA [NM_001081864]
ref|Equus caballus chemokine (C-C motif) ligand 8 (CCL8), mRNA [NM_001081864]
ref|Equus caballus MHC class I heavy chain (EQMHCC1), mRNA [NM_001082507]
ens|myeloid/lymphoid or mixed-lineage leukemia (trithorax homolog, Drosophila); translocated to, 10 [Source:HG
ens|tenascin C [Source:HGNC Symbol;Acc:5318] [ENSECAT00000019034]
ens|tenascin C [Source:HGNC Symbol;Acc:5318] [ENSECAT00000019034]
ens|tenascin C [Source:HGNC Symbol;Acc:5318] [ENSECAT00000019034]
ens|tenascin C [Source:HGNC Symbol;Acc:5318] [ENSECAT00000019034]
ens|tenascin C [Source:HGNC Symbol;Acc:5318] [ENSECAT00000019034]
ens|Uncharacterized protein [Source:UniProtKB/TrEMBL;Acc:F6UCY3] [ENSECAT00000016810]
ens|v-ets erythroblastosis virus E26 oncogene homolog 2 (avian) [Source:HGNC Symbol;Acc:3489] [ENSECAT00000
ens|hemoglobin, theta 1 [Source:HGNC Symbol;Acc:4833] [ENSECAT00000010450]
ref|Equus caballus bone morphogenetic protein 4 (BMP4), mRNA [NM_001163970]
ref|Equus caballus bone morphogenetic protein 4 (BMP4), mRNA [NM_001163970]
ens|arginase, type II [Source:HGNC Symbol;Acc:664] [ENSECAT00000017770]
ens|GNAS complex locus [Source:HGNC Symbol;Acc:4392] [ENSECAT00000026245]
ens|GNAS complex locus [Source:HGNC Symbol;Acc:4392] [ENSECAT00000026245]
ens|GNAS complex locus [Source:HGNC Symbol;Acc:4392] [ENSECAT00000026245]
ens|tropomyosin 4 [Source:HGNC Symbol;Acc:12013] [ENSECAT00000023888]
ens|tropomyosin 4 [Source:HGNC Symbol;Acc:12013] [ENSECAT00000023888]
ens|growth hormone receptor [Source:HGNC Symbol;Acc:4263] [ENSECAT00000003842]
ens|growth hormone receptor [Source:HGNC Symbol;Acc:4263] [ENSECAT00000003842]
ens|protein S (alpha) [Source:HGNC Symbol;Acc:9456] [ENSECAT00000017865]
ens|MHC class II DQ-alpha chain [Source:RefSeq peptide;Acc:NP_001122065] [ENSECAT00000026107]
ref|Equus caballus MHC class II DQ-beta chain (DQB), mRNA [NM_001142813]
ens|ARP3 actin-related protein 3 homolog (yeast) [Source:HGNC Symbol;Acc:170] [ENSECAT00000022413]
ens|collagen, type III, alpha 1 [Source:HGNC Symbol;Acc:2201] [ENSECAT00000026766]
ens|solute carrier family 7 (glycoprotein-associated amino acid transporter light chain, bo,+ system), member 9 [S
ens|solute carrier family 7 (glycoprotein-associated amino acid transporter light chain, bo,+ system), member 9 [S
ref|Equus caballus plasminogen activator, urokinase receptor (PLAUR), mRNA [NM_001163881]
ref|Equus caballus plasminogen activator, urokinase receptor (PLAUR), mRNA [NM_001163881]
ref|Equus caballus luteinizing hormone beta polypeptide (LHB), mRNA [NM_001197093]
ens|collagen, type XII, alpha 1 [Source:HGNC Symbol;Acc:2188] [ENSECAT00000027086]
ens|collagen, type XII, alpha 1 [Source:HGNC Symbol;Acc:2188] [ENSECAT00000027086]
ens|collagen, type XII, alpha 1 [Source:HGNC Symbol;Acc:2188] [ENSECAT00000027086]
ens|collagen, type XII, alpha 1 [Source:HGNC Symbol;Acc:2188] [ENSECAT00000027086]

ens|collagen, type XII, alpha 1 [Source:HGNC Symbol;Acc:2188] [ENSECAT00000027086]
ens|fibronectin 1 [Source:HGNC Symbol;Acc:3778] [ENSECAT00000007204]
ens|insulin-like growth factor binding protein 2, 36kDa [Source:HGNC Symbol;Acc:5471] [ENSECAT00000012491]
ens|insulin-like growth factor binding protein 5 [Source:HGNC Symbol;Acc:5474] [ENSECAT00000014055]
ens|insulin-like growth factor binding protein 5 [Source:HGNC Symbol;Acc:5474] [ENSECAT00000014055]
ens|insulin-like growth factor binding protein 5 [Source:HGNC Symbol;Acc:5474] [ENSECAT00000014055]
ens|insulin-like growth factor binding protein 5 [Source:HGNC Symbol;Acc:5474] [ENSECAT00000014055]
ens|insulin-like growth factor binding protein 5 [Source:HGNC Symbol;Acc:5474] [ENSECAT00000014055]
ens|period homolog 2 (Drosophila) [Source:HGNC Symbol;Acc:8846] [ENSECAT00000014506]
ens|period homolog 2 (Drosophila) [Source:HGNC Symbol;Acc:8846] [ENSECAT00000014506]
ens|period homolog 2 (Drosophila) [Source:HGNC Symbol;Acc:8846] [ENSECAT00000014506]
ref|Equus caballus lactate dehydrogenase B (LDHB), mRNA [NM_001145111]
ref|Equus caballus parathyroid hormone-like hormone (PTH LH), mRNA [NM_001163981]
ens|galactosidase, beta 1 [Source:HGNC Symbol;Acc:4298] [ENSECAT00000013017]
ens|actin, gamma 2, smooth muscle, enteric [Source:HGNC Symbol;Acc:145] [ENSECAT00000020181]
ens|actin, gamma 2, smooth muscle, enteric [Source:HGNC Symbol;Acc:145] [ENSECAT00000020181]
ens|actin, gamma 2, smooth muscle, enteric [Source:HGNC Symbol;Acc:145] [ENSECAT00000020181]
ens|actin, gamma 2, smooth muscle, enteric [Source:HGNC Symbol;Acc:145] [ENSECAT00000020181]
ens|actin, gamma 2, smooth muscle, enteric [Source:HGNC Symbol;Acc:145] [ENSECAT00000020181]
ens|apolipoprotein B (including Ag(x) antigen) [Source:HGNC Symbol;Acc:603] [ENSECAT00000009311]
ref|Equus caballus glutathione peroxidase 3 (plasma) (GPX3), mRNA [NM_001115158]
ref|Equus caballus glutathione peroxidase 3 (plasma) (GPX3), mRNA [NM_001115158]
ref|Equus caballus glutathione peroxidase 3 (plasma) (GPX3), mRNA [NM_001115158]
ref|Equus caballus glutathione peroxidase 3 (plasma) (GPX3), mRNA [NM_001115158]
ref|Equus caballus glutathione peroxidase 3 (plasma) (GPX3), mRNA [NM_001115158]
ens|thymidylate synthetase [Source:HGNC Symbol;Acc:12441] [ENSECAT00000024973]
ens|Hemoglobin subunit beta [Source:UniProtKB/Swiss-Prot;Acc:P02062] [ENSECAT00000010442]
ens|Hemoglobin subunit beta [Source:UniProtKB/Swiss-Prot;Acc:P02062] [ENSECAT00000010442]
ens|Hemoglobin subunit beta [Source:UniProtKB/Swiss-Prot;Acc:P02062] [ENSECAT00000010442]
ens|hemoglobin, epsilon 1 [Source:HGNC Symbol;Acc:4830] [ENSECAT00000012801]
ref|Equus caballus adrenomedullin (AMPP), mRNA [NM_001163879]
ens|ATPase, Na⁺/K⁺ transporting, beta 1 polypeptide [Source:HGNC Symbol;Acc:804] [ENSECAT00000019038]
ens|serpin peptidase inhibitor, clade C (antithrombin), member 1 [Source:HGNC Symbol;Acc:775] [ENSECAT00000000000]
ens|serpin peptidase inhibitor, clade C (antithrombin), member 1 [Source:HGNC Symbol;Acc:775] [ENSECAT00000000000]
ens|apolipoprotein A-II [Source:HGNC Symbol;Acc:601] [ENSECAT00000010408]
ens|selenium binding protein 1 [Source:HGNC Symbol;Acc:10719] [ENSECAT00000019513]
ens|ATP-binding cassette, sub-family B (MDR/TAP), member 1 [Source:HGNC Symbol;Acc:40] [ENSECAT00000002000]
ens|ATP-binding cassette, sub-family B (MDR/TAP), member 1 [Source:HGNC Symbol;Acc:40] [ENSECAT00000002000]
ens|ATP-binding cassette, sub-family B (MDR/TAP), member 1 [Source:HGNC Symbol;Acc:40] [ENSECAT00000002000]
ens|ATP-binding cassette, sub-family B (MDR/TAP), member 1 [Source:HGNC Symbol;Acc:40] [ENSECAT00000002000]
ens|ATP-binding cassette, sub-family B (MDR/TAP), member 1 [Source:HGNC Symbol;Acc:40] [ENSECAT00000002000]
ref|Equus caballus testis derived transcript (3 LIM domains) (TES), mRNA [NM_001114149]
ens|Metallothionein [Source:UniProtKB/TrEMBL;Acc:F7DM22] [ENSECAT00000015995]
ens|epiregulin [Source:HGNC Symbol;Acc:3443] [ENSECAT00000007654]
ens|epiregulin [Source:HGNC Symbol;Acc:3443] [ENSECAT00000007654]
ens|collagen, type IX, alpha 2 [Source:HGNC Symbol;Acc:2218] [ENSECAT00000012207]
ens|fibrinogen gamma chain [Source:HGNC Symbol;Acc:3694] [ENSECAT00000008714]

ref|Equus caballus thymosin beta 4, X-linked (TMSB4X), mRNA [NM_001163948]
ref|Equus caballus thymosin beta 4, X-linked (TMSB4X), mRNA [NM_001163948]
ref|Equus caballus thymosin beta 4, X-linked (TMSB4X), mRNA [NM_001163948]
ref|Equus caballus thymosin beta 4, X-linked (TMSB4X), mRNA [NM_001163948]
ref|Equus caballus pancreatic lipase (PNLIP), mRNA [NM_001163949]
ens|myoferlin [Source:HGNC Symbol;Acc:3656] [ENSECAT00000020082]
ens|actin, alpha 2, smooth muscle, aorta [Source:HGNC Symbol;Acc:130] [ENSECAT00000016072]
ens|collagen, type XIII, alpha 1 [Source:HGNC Symbol;Acc:2190] [ENSECAT00000019794]
ens|collagen, type XIII, alpha 1 [Source:HGNC Symbol;Acc:2190] [ENSECAT00000019794]
ens|plasminogen activator, urokinase [Source:HGNC Symbol;Acc:9052] [ENSECAT00000007708]
ref|Equus caballus fibroblast growth factor 7 (FGF7), mRNA [NM_001163883]
ens|actin, alpha, cardiac muscle 1 [Source:HGNC Symbol;Acc:143] [ENSECAT00000013669]
ens|ribonuclease, RNase A family, 1 (pancreatic) [Source:HGNC Symbol;Acc:10044] [ENSECAT00000012310]
ens|myosin, heavy chain 6, cardiac muscle, alpha [Source:HGNC Symbol;Acc:7576] [ENSECAT00000022901]
ens|Beta-2-microglobulin [Source:UniProtKB/Swiss-Prot;Acc:P30441] [ENSECAT00000001009]
ens|Beta-2-microglobulin [Source:UniProtKB/Swiss-Prot;Acc:P30441] [ENSECAT00000001009]
gb|Equus caballus subtracted library fragment 40. [AY246804]
gb|Equus caballus subtracted library fragment 40. [AY246804]
gb|Equus caballus subtracted library fragment 40. [AY246804]
gb|Equus caballus subtracted library fragment 40. [AY246804]
gb|Equus caballus subtracted library fragment 40. [AY246804]
gb|Equus caballus subtracted library fragment 48. [AY246812]
gb|Equus caballus subtracted library fragment 48. [AY246812]
gb|Equus caballus subtracted library fragment 48. [AY246812]
gb|Equus caballus subtracted library fragment 48. [AY246812]
gb|Equus caballus subtracted library fragment 48. [AY246812]
ref|Equus caballus inducible nitric oxide synthase (INOS), mRNA [NM_001081769]
ref|Equus caballus prostaglandin-endoperoxide synthase 2 (prostaglandin G/H synthase and cyclooxygenase) (PTC
gb|Equus caballus DCN mRNA for decorin, partial cds. [AB106279]
ens|actinin, alpha 2 [Source:HGNC Symbol;Acc:164] [ENSECAT00000011002]
ref|Equus caballus inducible nitric oxide synthase (INOS), mRNA [NM_001081769]
ref|Equus caballus inducible nitric oxide synthase (INOS), mRNA [NM_001081769]
ref|Equus caballus inducible nitric oxide synthase (INOS), mRNA [NM_001081769]
ref|Equus caballus inducible nitric oxide synthase (INOS), mRNA [NM_001081769]
ref|Equus caballus inducible nitric oxide synthase (INOS), mRNA [NM_001081769]
ens|ARP3 actin-related protein 3 homolog (yeast) [Source:HGNC Symbol;Acc:170] [ENSECAT00000022413]
ens|ARP3 actin-related protein 3 homolog (yeast) [Source:HGNC Symbol;Acc:170] [ENSECAT00000022413]
ens|ARP3 actin-related protein 3 homolog (yeast) [Source:HGNC Symbol;Acc:170] [ENSECAT00000022413]
ens|ARP3 actin-related protein 3 homolog (yeast) [Source:HGNC Symbol;Acc:170] [ENSECAT00000022413]
gb|Equus caballus partial mRNA for high affinity IgE receptor gamma subunit (fceR1g gene). [AJ318334]
gb|Equus caballus partial mRNA for high affinity IgE receptor gamma subunit (fceR1g gene). [AJ318334]
gb|Equus caballus partial mRNA for high affinity IgE receptor gamma subunit (fceR1g gene). [AJ318334]
ens|apolipoprotein B (including Ag(x) antigen) [Source:HGNC Symbol;Acc:603] [ENSECAT00000009411]
ref|Equus caballus vascular endothelial growth factor A (VEGFA), mRNA [NM_001081821]
ref|Equus caballus vascular endothelial growth factor A (VEGFA), mRNA [NM_001081821]
ref|Equus caballus vascular endothelial growth factor A (VEGFA), mRNA [NM_001081821]
ref|Equus caballus vascular endothelial growth factor A (VEGFA), mRNA [NM_001081821]

ref|Equus caballus vascular endothelial growth factor A (VEGFA), mRNA [NM_001081821]
ref|Equus caballus fibroblast growth factor 7 (FGF7), mRNA [NM_001163883]
ref|Equus caballus fibroblast growth factor 7 (FGF7), mRNA [NM_001163883]
ref|Equus caballus fibroblast growth factor 7 (FGF7), mRNA [NM_001163883]
ref|Equus caballus fibroblast growth factor 7 (FGF7), mRNA [NM_001163883]
ref|Equus caballus inducible nitric oxide synthase (INOS), mRNA [NM_001081769]
gb|Equus caballus partial mRNA for aquaporin 5 (aqp5 gene). [AJ555456]
gb|Equus caballus isolate 128 MHC class I antigen mRNA, partial cds. [AY176116]
ref|Equus caballus myosin, heavy chain 7, cardiac muscle, beta (MYH7), mRNA [NM_001081758]
ref|Equus caballus myosin, heavy chain 7, cardiac muscle, beta (MYH7), mRNA [NM_001081758]
ref|Equus caballus myosin, heavy chain 7, cardiac muscle, beta (MYH7), mRNA [NM_001081758]
ref|Equus caballus bone morphogenetic protein 4 (BMP4), mRNA [NM_001163970]
ens|arginase, type II [Source:HGNC Symbol;Acc:664] [ENSECAT00000017770]
ens|arginase, type II [Source:HGNC Symbol;Acc:664] [ENSECAT00000017770]
ens|arginase, type II [Source:HGNC Symbol;Acc:664] [ENSECAT00000017770]
ens|arginase, type II [Source:HGNC Symbol;Acc:664] [ENSECAT00000017770]
ref|Equus caballus 7-51 putative nonclassical MHC class I antigen (LOC100051657), mRNA [NM_001099765]
gb|Equus caballus MHC class I antigen 5.b (Eqca-16) mRNA, Eqca-16*00201 allele, partial cds. [DQ145594]
ref|Equus caballus MHC class I heavy chain (EQMHCB2), mRNA [NM_001082506]
gb|Equus caballus MHC class I antigen 10.a (Eqca-N) mRNA, Eqca-N*00501 allele, partial cds. [DQ145599]
ref|Equus caballus MHC class I heavy chain (EQMHCB2), mRNA [NM_001082506]
ens|Uncharacterized protein [Source:UniProtKB/TrEMBL;Acc:F6VU44] [ENSECAT00000024282]
ens|ATP-binding cassette, sub-family G (WHITE), member 2 [Source:HGNC Symbol;Acc:74] [ENSECAT0000001051]
ref|Equus caballus defensin, alpha 3, neutrophil-specific (DEFA3), mRNA [NM_001166234]
ref|Equus caballus defensin, alpha 3, neutrophil-specific (DEFA3), mRNA [NM_001166234]
ref|Equus caballus defensin, alpha 3, neutrophil-specific (DEFA3), mRNA [NM_001166234]
ref|Equus caballus defensin, alpha 3, neutrophil-specific (DEFA3), mRNA [NM_001166234]
ref|Equus caballus defensin, alpha 3, neutrophil-specific (DEFA3), mRNA [NM_001166234]
ens|Uncharacterized protein [Source:UniProtKB/TrEMBL;Acc:F6XH52] [ENSECAT00000018004]
ref|Equus caballus cytochrome P450, family 19, subfamily A, polypeptide 1 (CYP19A1), mRNA [NM_001081805]
ref|Equus caballus cytochrome P450, family 19, subfamily A, polypeptide 1 (CYP19A1), mRNA [NM_001081805]
ref|Equus caballus cytochrome P450, family 19, subfamily A, polypeptide 1 (CYP19A1), mRNA [NM_001081805]
ref|Equus caballus interleukin 1, beta (IL1B), mRNA [NM_001082526]
ref|Equus caballus interleukin 1, beta (IL1B), mRNA [NM_001082526]
ref|Equus caballus chemokine (C-C motif) ligand 2 (CCL2), mRNA [NM_001081931]
gb|Equus caballus (clone pcDNACG2) MHC class I mRNA, complete cds. [L42623]
gb|Equus caballus chorionic gonadotropin alpha-subunit (CG) mRNA, 3' end. [M27462]
gb|Equus caballus chorionic gonadotropin alpha-subunit (CG) mRNA, 3' end. [M27462]
gb|Equus caballus chorionic gonadotropin alpha-subunit (CG) mRNA, 3' end. [M27462]
gb|Equus caballus chorionic gonadotropin alpha-subunit (CG) mRNA, 3' end. [M27462]
gb|Equus caballus MHC class I antigen (Eqca-N) mRNA, Eqca-N*00101 allele, complete cds. [M95409]
ens|Uncharacterized protein [Source:UniProtKB/TrEMBL;Acc:F6XH52] [ENSECAT00000018004]
ref|Equus caballus cytochrome P450, family 19, subfamily A, polypeptide 1 (CYP19A1), mRNA [NM_001081805]
ref|Equus caballus cytochrome P450, family 19, subfamily A, polypeptide 1 (CYP19A1), mRNA [NM_001081805]
ref|Equus caballus cytochrome P450, family 19, subfamily A, polypeptide 1 (CYP19A1), mRNA [NM_001081805]
ref|Equus caballus cytochrome P450, family 19, subfamily A, polypeptide 1 (CYP19A1), mRNA [NM_001081805]

ref|Equus caballus cytochrome P450, family 19, subfamily A, polypeptide 1 (CYP19A1), mRNA [NM_001081805]
ens|Biglycan [Source:UniProtKB/Swiss-Prot;Acc:O46403] [ENSECAT00000020077]
gb|Equus caballus isolate 108 MHC class I antigen-like mRNA, partial sequence. [AY176096]
ref|Equus caballus MHC class I heavy chain (EQMHCB2), mRNA [NM_001082506]
ens|v-maf musculoaponeurotic fibrosarcoma oncogene homolog F (avian) [Source:HGNC Symbol;Acc:6780] [ENSE
ens|GTPase, IMAP family member 6 [Source:HGNC Symbol;Acc:21918] [ENSECAT00000003837]
ens|Uncharacterized protein [Source:UniProtKB/TrEMBL;Acc:H9GZZ3] [ENSECAT00000016216]
ens|cell division cycle 45 homolog (S. cerevisiae) [Source:HGNC Symbol;Acc:1739] [ENSECAT00000012250]
ens|cell division cycle 45 homolog (S. cerevisiae) [Source:HGNC Symbol;Acc:1739] [ENSECAT00000012250]
ens|aldehyde dehydrogenase 1 family, member L1 [Source:HGNC Symbol;Acc:3978] [ENSECAT00000022380]
ens|unc-93 homolog A (C. elegans) [Source:HGNC Symbol;Acc:12570] [ENSECAT00000009010]
ens|T-cell lymphoma invasion and metastasis 2 [Source:HGNC Symbol;Acc:11806] [ENSECAT00000025740]
ens|regulator of G-protein signaling 17 [Source:HGNC Symbol;Acc:14088] [ENSECAT00000023751]
ens|syntaxin 11 [Source:HGNC Symbol;Acc:11429] [ENSECAT00000000196]
ens|enabled homolog (Drosophila) [Source:HGNC Symbol;Acc:18271] [ENSECAT00000024209]
ens|tumor protein p53 binding protein, 2 [Source:HGNC Symbol;Acc:12000] [ENSECAT00000006938]
ens|tumor protein p53 binding protein, 2 [Source:HGNC Symbol;Acc:12000] [ENSECAT00000006938]
ens|tumor protein p53 binding protein, 2 [Source:HGNC Symbol;Acc:12000] [ENSECAT00000006938]
ens|tumor protein p53 binding protein, 2 [Source:HGNC Symbol;Acc:12000] [ENSECAT00000006938]
ens|tumor protein p53 binding protein, 2 [Source:HGNC Symbol;Acc:12000] [ENSECAT00000006938]
ens|calpain 2, (m/II) large subunit [Source:HGNC Symbol;Acc:1479] [ENSECAT00000011939]
ens|calpain 2, (m/II) large subunit [Source:HGNC Symbol;Acc:1479] [ENSECAT00000011939]
ens|calpain 2, (m/II) large subunit [Source:HGNC Symbol;Acc:1479] [ENSECAT00000011939]
ens|calpain 2, (m/II) large subunit [Source:HGNC Symbol;Acc:1479] [ENSECAT00000011939]
ens|dispatched homolog 1 (Drosophila) [Source:HGNC Symbol;Acc:19711] [ENSECAT00000015234]
ens|dispatched homolog 1 (Drosophila) [Source:HGNC Symbol;Acc:19711] [ENSECAT00000015234]
ens|transforming growth factor, beta 2 [Source:HGNC Symbol;Acc:11768] [ENSECAT00000017826]
ens|transforming growth factor, beta 2 [Source:HGNC Symbol;Acc:11768] [ENSECAT00000017826]
ens|Uncharacterized protein [Source:UniProtKB/TrEMBL;Acc:F6ZR63] [ENSECAT00000012247]
ens|Uncharacterized protein [Source:UniProtKB/TrEMBL;Acc:F6U1J0] [ENSECAT00000006831]
ens|asp (abnormal spindle) homolog, microcephaly associated (Drosophila) [Source:HGNC Symbol;Acc:19048] [EN
ens|asp (abnormal spindle) homolog, microcephaly associated (Drosophila) [Source:HGNC Symbol;Acc:19048] [EN
ens|Uncharacterized protein [Source:UniProtKB/TrEMBL;Acc:F6Y1M3] [ENSECAT00000025624]
ens|Uncharacterized protein [Source:UniProtKB/TrEMBL;Acc:F6Y1M3] [ENSECAT00000025624]
ens|ubiquitin-conjugating enzyme E2T (putative) [Source:HGNC Symbol;Acc:25009] [ENSECAT00000021785]
ens|ubiquitin-conjugating enzyme E2T (putative) [Source:HGNC Symbol;Acc:25009] [ENSECAT00000021785]
ens|E74-like factor 5 (ets domain transcription factor) [Source:HGNC Symbol;Acc:3320] [ENSECAT00000025042]
ens|E74-like factor 5 (ets domain transcription factor) [Source:HGNC Symbol;Acc:3320] [ENSECAT00000025042]
ens|coagulation factor II (thrombin) [Source:HGNC Symbol;Acc:3535] [ENSECAT00000012295]
ens|coagulation factor II (thrombin) [Source:HGNC Symbol;Acc:3535] [ENSECAT00000012295]
ens|myosin binding protein C, cardiac [Source:HGNC Symbol;Acc:7551] [ENSECAT00000026147]
ens|serpin peptidase inhibitor, clade G (C1 inhibitor), member 1 [Source:HGNC Symbol;Acc:1228] [ENSECAT00000
ens|transcobalamin I (vitamin B12 binding protein, R binder family) [Source:HGNC Symbol;Acc:11652] [ENSECAT0
ens|solute carrier family 3 (activators of dibasic and neutral amino acid transport), member 2 [Source:HGNC Symt
ens|ribonuclease H2, subunit C [Source:HGNC Symbol;Acc:24116] [ENSECAT00000018200]
ens|EGF containing fibulin-like extracellular matrix protein 2 [Source:HGNC Symbol;Acc:3219] [ENSECAT00000022
ens|EGF containing fibulin-like extracellular matrix protein 2 [Source:HGNC Symbol;Acc:3219] [ENSECAT00000022

ens|EGF containing fibulin-like extracellular matrix protein 2 [Source:HGNC Symbol;Acc:3219] [ENSECAT00000022
ens|EGF containing fibulin-like extracellular matrix protein 2 [Source:HGNC Symbol;Acc:3219] [ENSECAT00000022
ens|EGF containing fibulin-like extracellular matrix protein 2 [Source:HGNC Symbol;Acc:3219] [ENSECAT00000022
ens|cystatin E/M [Source:HGNC Symbol;Acc:2478] [ENSECAT00000026163]
ens|CD81 molecule [Source:HGNC Symbol;Acc:1701] [ENSECAT00000026586]
ens|solute carrier family 22, member 18 [Source:HGNC Symbol;Acc:10964] [ENSECAT00000026959]
ens|pleckstrin homology-like domain, family A, member 2 [Source:HGNC Symbol;Acc:12385] [ENSECAT000000069
ens|supervillin [Source:HGNC Symbol;Acc:11480] [ENSECAT00000022469]
ens|protein tyrosine phosphatase-like (proline instead of catalytic arginine), member A [Source:HGNC Symbol;Acc
ens|protein tyrosine phosphatase-like (proline instead of catalytic arginine), member A [Source:HGNC Symbol;Acc
ens|inter-alpha-trypsin inhibitor heavy chain 2 [Source:HGNC Symbol;Acc:6167] [ENSECAT00000019438]
ens|Uncharacterized protein [Source:UniProtKB/TrEMBL;Acc:F6QYV5] [ENSECAT00000009051]
ref|Equus caballus aldo-keto reductase family 1, member C1 (AKR1C1), mRNA [NM_001081908]
ens|Uncharacterized protein [Source:UniProtKB/TrEMBL;Acc:F7BYJ1] [ENSECAT00000021386]
ens|Uncharacterized protein [Source:UniProtKB/TrEMBL;Acc:F6SWA0] [ENSECAT00000013506]
ens|Uncharacterized protein [Source:UniProtKB/TrEMBL;Acc:F6REU5] [ENSECAT00000012814]
ens|tropomyosin 2 (beta) [Source:HGNC Symbol;Acc:12011] [ENSECAT00000014868]
ens|tropomyosin 2 (beta) [Source:HGNC Symbol;Acc:12011] [ENSECAT00000014868]
ens|tropomyosin 2 (beta) [Source:HGNC Symbol;Acc:12011] [ENSECAT00000014868]
ens|Uncharacterized protein [Source:UniProtKB/TrEMBL;Acc:F6ZY67] [ENSECAT00000014546]
ens|Uncharacterized protein [Source:UniProtKB/TrEMBL;Acc:F6ZY67] [ENSECAT00000014546]
ens|UDP-N-acetyl-alpha-D-galactosamine:polypeptide N-acetylgalactosaminyltransferase 12 (GalNAc-T12) [Source
ens|bile acid CoA: amino acid N-acyltransferase (glycine N-choloyltransferase) [Source:HGNC Symbol;Acc:932] [EN
ens|solute carrier family 31 (copper transporters), member 2 [Source:HGNC Symbol;Acc:11017] [ENSECAT000000
ens|solute carrier family 31 (copper transporters), member 2 [Source:HGNC Symbol;Acc:11017] [ENSECAT000000
ens|zinc finger protein 618 [Source:HGNC Symbol;Acc:29416] [ENSECAT00000022007]
ens|zinc finger protein 618 [Source:HGNC Symbol;Acc:29416] [ENSECAT00000022007]
ens|zinc finger protein 618 [Source:HGNC Symbol;Acc:29416] [ENSECAT00000022007]
ens|zinc finger protein 618 [Source:HGNC Symbol;Acc:29416] [ENSECAT00000022007]
ens|zinc finger protein 618 [Source:HGNC Symbol;Acc:29416] [ENSECAT00000022007]
ens|ATPase, H⁺ transporting, lysosomal 13kDa, V1 subunit G1 [Source:HGNC Symbol;Acc:864] [ENSECAT00000011
ens|deleted in bladder cancer 1 [Source:HGNC Symbol;Acc:2687] [ENSECAT00000015557]
ens|deleted in bladder cancer 1 [Source:HGNC Symbol;Acc:2687] [ENSECAT00000015557]
ens|deleted in bladder cancer 1 [Source:HGNC Symbol;Acc:2687] [ENSECAT00000015557]
ens|deleted in bladder cancer 1 [Source:HGNC Symbol;Acc:2687] [ENSECAT00000015557]
ens|Uncharacterized protein [Source:UniProtKB/TrEMBL;Acc:F6UX61] [ENSECAT00000024562]
ens|Uncharacterized protein [Source:UniProtKB/TrEMBL;Acc:F6UX61] [ENSECAT00000024562]
ens|endonuclease G [Source:HGNC Symbol;Acc:3346] [ENSECAT00000010049]
ens|argininosuccinate synthase 1 [Source:HGNC Symbol;Acc:758] [ENSECAT00000007510]
ens|ral guanine nucleotide dissociation stimulator [Source:HGNC Symbol;Acc:9842] [ENSECAT00000023782]
ens|ral guanine nucleotide dissociation stimulator [Source:HGNC Symbol;Acc:9842] [ENSECAT00000023782]
ens|NADPH oxidase activator 1 [Source:HGNC Symbol;Acc:10668] [ENSECAT00000020347]
ens|chromosome 8 open reading frame 4 [Source:HGNC Symbol;Acc:1357] [ENSECAT00000002912]
ens|chromosome 8 open reading frame 4 [Source:HGNC Symbol;Acc:1357] [ENSECAT00000002912]
ens|chromosome 8 open reading frame 4 [Source:HGNC Symbol;Acc:1357] [ENSECAT00000002912]
ens|chromosome 8 open reading frame 4 [Source:HGNC Symbol;Acc:1357] [ENSECAT00000002912]
ens|chromosome 8 open reading frame 4 [Source:HGNC Symbol;Acc:1357] [ENSECAT00000002912]

ens|zinc finger, DHHC-type containing 2 [Source:HGNC Symbol;Acc:18469] [ENSECAT00000015443]
ens|myotubularin related protein 7 [Source:HGNC Symbol;Acc:7454] [ENSECAT00000011468]
ens|myotubularin related protein 7 [Source:HGNC Symbol;Acc:7454] [ENSECAT00000011468]
ens|solute carrier family 7 (cationic amino acid transporter, y+ system), member 2 [Source:HGNC Symbol;Acc:110]
ens|solute carrier family 7 (cationic amino acid transporter, y+ system), member 2 [Source:HGNC Symbol;Acc:110]
ens|tripartite motif family-like 2 [Source:HGNC Symbol;Acc:26378] [ENSECAT00000012876]
ens|zinc finger protein 42 homolog (mouse) [Source:HGNC Symbol;Acc:30949] [ENSECAT00000005945]
ens|glycoprotein M6A [Source:HGNC Symbol;Acc:4460] [ENSECAT00000017831]
ens|glycoprotein M6A [Source:HGNC Symbol;Acc:4460] [ENSECAT00000017831]
ens|MIS18 kinetochore protein homolog A (S. pombe) [Source:HGNC Symbol;Acc:1286] [ENSECAT00000010638]
ens|MIS18 kinetochore protein homolog A (S. pombe) [Source:HGNC Symbol;Acc:1286] [ENSECAT00000010638]
ens|Uncharacterized protein [Source:UniProtKB/TrEMBL;Acc:F7DD55] [ENSECAT00000007495]
ens|Uncharacterized protein [Source:UniProtKB/TrEMBL;Acc:F6ZDE0] [ENSECAT00000020477]
ens|Uncharacterized protein [Source:UniProtKB/TrEMBL;Acc:F6ZDE0] [ENSECAT00000020477]
ens|Uncharacterized protein [Source:UniProtKB/TrEMBL;Acc:F6ZDE0] [ENSECAT00000020477]
ens|Uncharacterized protein [Source:UniProtKB/TrEMBL;Acc:F6ZDE0] [ENSECAT00000020477]
ens|Uncharacterized protein [Source:UniProtKB/TrEMBL;Acc:F6ZDE0] [ENSECAT00000020477]
ens|Purkinje cell protein 4 [Source:HGNC Symbol;Acc:8742] [ENSECAT00000012965]
ens|Purkinje cell protein 4 [Source:HGNC Symbol;Acc:8742] [ENSECAT00000012965]
ens|beta-site APP-cleaving enzyme 2 [Source:HGNC Symbol;Acc:934] [ENSECAT00000006093]
ens|beta-site APP-cleaving enzyme 2 [Source:HGNC Symbol;Acc:934] [ENSECAT00000006093]
ens|beta-site APP-cleaving enzyme 2 [Source:HGNC Symbol;Acc:934] [ENSECAT00000006093]
ens|beta-site APP-cleaving enzyme 2 [Source:HGNC Symbol;Acc:934] [ENSECAT00000006093]
ens|family with sequence similarity 3, member B [Source:HGNC Symbol;Acc:1253] [ENSECAT00000017278]
ens|family with sequence similarity 3, member B [Source:HGNC Symbol;Acc:1253] [ENSECAT00000017278]
ens|family with sequence similarity 3, member B [Source:HGNC Symbol;Acc:1253] [ENSECAT00000017278]
ens|ubiquitin associated and SH3 domain containing A [Source:HGNC Symbol;Acc:12462] [ENSECAT00000018080]
ens|ubiquitin associated and SH3 domain containing A [Source:HGNC Symbol;Acc:12462] [ENSECAT00000018080]
ens|ubiquitin associated and SH3 domain containing A [Source:HGNC Symbol;Acc:12462] [ENSECAT00000018080]
ens|ubiquitin associated and SH3 domain containing A [Source:HGNC Symbol;Acc:12462] [ENSECAT00000018080]
ens|autoimmune regulator [Source:HGNC Symbol;Acc:360] [ENSECAT00000013565]
ens|formiminotransferase cyclodeaminase [Source:HGNC Symbol;Acc:3974] [ENSECAT00000012871]
ens|actin related protein 2/3 complex, subunit 1B, 41kDa [Source:HGNC Symbol;Acc:704] [ENSECAT00000027002]
ens|transmembrane protein 184A [Source:HGNC Symbol;Acc:28797] [ENSECAT00000018983]
ens|Williams-Beuren syndrome chromosome region 16 [Source:HGNC Symbol;Acc:14948] [ENSECAT00000023594]
ens|minichromosome maintenance complex component 7 [Source:HGNC Symbol;Acc:6950] [ENSECAT000000158]
ens|chemokine (C-C motif) ligand 26 [Source:HGNC Symbol;Acc:10625] [ENSECAT00000024168]
ens|chemokine (C-C motif) ligand 26 [Source:HGNC Symbol;Acc:10625] [ENSECAT00000024168]
ens|vitamin K epoxide reductase complex, subunit 1-like 1 [Source:HGNC Symbol;Acc:21492] [ENSECAT00000011!]
ens|vitamin K epoxide reductase complex, subunit 1-like 1 [Source:HGNC Symbol;Acc:21492] [ENSECAT00000011!]
ens|vitamin K epoxide reductase complex, subunit 1-like 1 [Source:HGNC Symbol;Acc:21492] [ENSECAT00000011!]
ens|alpha hemoglobin stabilizing protein [Source:HGNC Symbol;Acc:18075] [ENSECAT00000010684]
ens|alpha hemoglobin stabilizing protein [Source:HGNC Symbol;Acc:18075] [ENSECAT00000010684]
ens|alpha hemoglobin stabilizing protein [Source:HGNC Symbol;Acc:18075] [ENSECAT00000010684]
ens|alpha hemoglobin stabilizing protein [Source:HGNC Symbol;Acc:18075] [ENSECAT00000010684]
ens|alpha hemoglobin stabilizing protein [Source:HGNC Symbol;Acc:18075] [ENSECAT00000010684]
ens|quinolinate phosphoribosyltransferase [Source:HGNC Symbol;Acc:9755] [ENSECAT00000009176]

ens|zymogen granule protein 16 homolog (rat) [Source:HGNC Symbol;Acc:30961] [ENSECAT00000014365]
ens|kinesin family member 22 [Source:HGNC Symbol;Acc:6391] [ENSECAT00000015589]
ens|apolipoprotein B receptor [Source:HGNC Symbol;Acc:24087] [ENSECAT00000017847]
ens|polo-like kinase 1 [Source:HGNC Symbol;Acc:9077] [ENSECAT00000019156]
ens|polo-like kinase 1 [Source:HGNC Symbol;Acc:9077] [ENSECAT00000019156]
ens|polo-like kinase 1 [Source:HGNC Symbol;Acc:9077] [ENSECAT00000019156]
ens|polo-like kinase 1 [Source:HGNC Symbol;Acc:9077] [ENSECAT00000019156]
ens|polo-like kinase 1 [Source:HGNC Symbol;Acc:9077] [ENSECAT00000019156]
ens|sodium channel, non-voltage-gated 1, beta subunit [Source:HGNC Symbol;Acc:10600] [ENSECAT00000016012]
ens|phospholipase A2, group X [Source:HGNC Symbol;Acc:9029] [ENSECAT00000017443]
ens|phospholipase A2, group X [Source:HGNC Symbol;Acc:9029] [ENSECAT00000017443]
ens|phospholipase A2, group X [Source:HGNC Symbol;Acc:9029] [ENSECAT00000017443]
ens|phospholipase A2, group X [Source:HGNC Symbol;Acc:9029] [ENSECAT00000017443]
ens|phospholipase A2, group X [Source:HGNC Symbol;Acc:9029] [ENSECAT00000017443]
ens|4-aminobutyrate aminotransferase [Source:HGNC Symbol;Acc:23] [ENSECAT00000025581]
ens|coiled-coil domain containing 78 [Source:HGNC Symbol;Acc:14153] [ENSECAT00000011222]
ens|transmembrane protein 8A [Source:HGNC Symbol;Acc:17205] [ENSECAT00000022868]
ens|GLI pathogenesis-related 1 [Source:HGNC Symbol;Acc:17001] [ENSECAT00000016491]
ens|GLI pathogenesis-related 1 [Source:HGNC Symbol;Acc:17001] [ENSECAT00000016491]
ens|cysteine and glycine-rich protein 2 [Source:HGNC Symbol;Acc:2470] [ENSECAT00000016520]
ens|dual specificity phosphatase 6 [Source:HGNC Symbol;Acc:3072] [ENSECAT00000010410]
ens|POC1 centriolar protein homolog B (Chlamydomonas) [Source:HGNC Symbol;Acc:30836] [ENSECAT00000014:
ens|POC1 centriolar protein homolog B (Chlamydomonas) [Source:HGNC Symbol;Acc:30836] [ENSECAT00000014:
ens|glycosyltransferase 8 domain containing 2 [Source:HGNC Symbol;Acc:24890] [ENSECAT00000015554]
ens|glycosyltransferase 8 domain containing 2 [Source:HGNC Symbol;Acc:24890] [ENSECAT00000015554]
ens|cytoskeleton-associated protein 4 [Source:HGNC Symbol;Acc:16991] [ENSECAT00000006854]
ens|cytoskeleton-associated protein 4 [Source:HGNC Symbol;Acc:16991] [ENSECAT00000006854]
ens|heme oxygenase (decycling) 1 [Source:HGNC Symbol;Acc:5013] [ENSECAT00000001574]
ens|minichromosome maintenance complex component 5 [Source:HGNC Symbol;Acc:6948] [ENSECAT000000150
ens|casein kinase 1, epsilon [Source:HGNC Symbol;Acc:2453] [ENSECAT00000023450]
ens|proline rich 5 (renal) [Source:HGNC Symbol;Acc:31682] [ENSECAT00000007954]
ens|uroplakin 3A [Source:HGNC Symbol;Acc:12580] [ENSECAT00000009366]
ens|fibulin 1 [Source:HGNC Symbol;Acc:3600] [ENSECAT00000019662]
ens|cyclin-dependent kinase inhibitor 3 [Source:HGNC Symbol;Acc:1791] [ENSECAT00000020590]
ens|discs, large (Drosophila) homolog-associated protein 5 [Source:HGNC Symbol;Acc:16864] [ENSECAT00000008
ens|dehydrogenase/reductase (SDR family) member 7 [Source:HGNC Symbol;Acc:21524] [ENSECAT00000011872]
ens|fucosyltransferase 8 (alpha (1,6) fucosyltransferase) [Source:HGNC Symbol;Acc:4019] [ENSECAT00000015238
ens|aldehyde dehydrogenase 6 family, member A1 [Source:HGNC Symbol;Acc:7179] [ENSECAT00000009974]
ens|transmembrane emp24 protein transport domain containing 8 [Source:HGNC Symbol;Acc:18633] [ENSECAT0
ens|fibronectin leucine rich transmembrane protein 2 [Source:HGNC Symbol;Acc:3761] [ENSECAT00000009153]
ens|fibronectin leucine rich transmembrane protein 2 [Source:HGNC Symbol;Acc:3761] [ENSECAT00000009153]
ens|legumain [Source:HGNC Symbol;Acc:9472] [ENSECAT00000011040]
ens|legumain [Source:HGNC Symbol;Acc:9472] [ENSECAT00000011040]
ens|legumain [Source:HGNC Symbol;Acc:9472] [ENSECAT00000011040]
ens|legumain [Source:HGNC Symbol;Acc:9472] [ENSECAT00000011040]
ens|legumain [Source:HGNC Symbol;Acc:9472] [ENSECAT00000011040]
ref|Equus caballus alpha-1-antitrypsin (SPI2), mRNA [NM_001114533]

ens|Uncharacterized protein [Source:UniProtKB/TrEMBL;Acc:F7CSL8] [ENSECAT00000015356]
ens|serpin peptidase inhibitor, clade A (alpha-1 antiproteinase, antitrypsin), member 5 [Source:HGNC Symbol;Acc:ens|serpin peptidase inhibitor, clade A (alpha-1 antiproteinase, antitrypsin), member 3 [Source:HGNC Symbol;Acc:ens|delta-like 1 homolog (Drosophila) [Source:HGNC Symbol;Acc:2907] [ENSECAT00000012776]
ens|MAP/microtubule affinity-regulating kinase 3 [Source:HGNC Symbol;Acc:6897] [ENSECAT00000018176]
ens|creatine kinase, brain [Source:HGNC Symbol;Acc:1991] [ENSECAT00000009258]
ens|creatine kinase, brain [Source:HGNC Symbol;Acc:1991] [ENSECAT00000009258]
ens|creatine kinase, brain [Source:HGNC Symbol;Acc:1991] [ENSECAT00000009258]
ens|creatine kinase, brain [Source:HGNC Symbol;Acc:1991] [ENSECAT00000009258]
ens|creatine kinase, brain [Source:HGNC Symbol;Acc:1991] [ENSECAT00000009258]
ens|inverted formin, FH2 and WH2 domain containing [Source:HGNC Symbol;Acc:23791] [ENSECAT00000008146]
ens|v-akt murine thymoma viral oncogene homolog 1 [Source:HGNC Symbol;Acc:391] [ENSECAT00000009000]
ens|beaded filament structural protein 1, filensin [Source:HGNC Symbol;Acc:1040] [ENSECAT00000022472]
ens|CDP-diacylglycerol synthase (phosphatidate cytidyltransferase) 2 [Source:HGNC Symbol;Acc:1801] [ENSECA
ens|CDP-diacylglycerol synthase (phosphatidate cytidyltransferase) 2 [Source:HGNC Symbol;Acc:1801] [ENSECA
ens|inhibitor of DNA binding 1, dominant negative helix-loop-helix protein [Source:HGNC Symbol;Acc:5360] [ENSE
ens|inhibitor of DNA binding 1, dominant negative helix-loop-helix protein [Source:HGNC Symbol;Acc:5360] [ENSE
ens|inhibitor of DNA binding 1, dominant negative helix-loop-helix protein [Source:HGNC Symbol;Acc:5360] [ENSE
ens|inhibitor of DNA binding 1, dominant negative helix-loop-helix protein [Source:HGNC Symbol;Acc:5360] [ENSE
ens|inhibitor of DNA binding 1, dominant negative helix-loop-helix protein [Source:HGNC Symbol;Acc:5360] [ENSE
ens|TPX2, microtubule-associated, homolog (Xenopus laevis) [Source:HGNC Symbol;Acc:1249] [ENSECAT00000002
ens|TPX2, microtubule-associated, homolog (Xenopus laevis) [Source:HGNC Symbol;Acc:1249] [ENSECAT00000002
ens|E2F transcription factor 1 [Source:HGNC Symbol;Acc:3113] [ENSECAT00000025589]
ens|chromosome 20 open reading frame 152 [Source:HGNC Symbol;Acc:16145] [ENSECAT00000012422]
ens|erythrocyte membrane protein band 4.1-like 1 [Source:HGNC Symbol;Acc:3378] [ENSECAT00000018648]
ens|erythrocyte membrane protein band 4.1-like 1 [Source:HGNC Symbol;Acc:3378] [ENSECAT00000018648]
ens|erythrocyte membrane protein band 4.1-like 1 [Source:HGNC Symbol;Acc:3378] [ENSECAT00000018648]
ens|erythrocyte membrane protein band 4.1-like 1 [Source:HGNC Symbol;Acc:3378] [ENSECAT00000018648]
ens|erythrocyte membrane protein band 4.1-like 1 [Source:HGNC Symbol;Acc:3378] [ENSECAT00000018648]
ens|myosin, light chain 9, regulatory [Source:HGNC Symbol;Acc:15754] [ENSECAT00000007656]
ens|family with sequence similarity 83, member D [Source:HGNC Symbol;Acc:16122] [ENSECAT00000013800]
ens|family with sequence similarity 83, member D [Source:HGNC Symbol;Acc:16122] [ENSECAT00000013800]
ens|v-myb myeloblastosis viral oncogene homolog (avian)-like 2 [Source:HGNC Symbol;Acc:7548] [ENSECAT00000
ens|Uncharacterized protein [Source:UniProtKB/TrEMBL;Acc:F6VMN7] [ENSECAT00000001317]
ens|Uncharacterized protein [Source:UniProtKB/TrEMBL;Acc:F6VMN7] [ENSECAT00000001317]
ens|Uncharacterized protein [Source:UniProtKB/TrEMBL;Acc:F6VMN7] [ENSECAT00000001317]
ens|Uncharacterized protein [Source:UniProtKB/TrEMBL;Acc:F6VMN7] [ENSECAT00000001317]
ens|Uncharacterized protein [Source:UniProtKB/TrEMBL;Acc:F6VMN7] [ENSECAT00000001317]
ens|WAP four-disulfide core domain 2 [Source:HGNC Symbol;Acc:15939] [ENSECAT00000018637]
ens|WAP four-disulfide core domain 3 [Source:HGNC Symbol;Acc:15957] [ENSECAT00000024502]
ens|ubiquitin-conjugating enzyme E2C [Source:HGNC Symbol;Acc:15937] [ENSECAT00000015457]
ens|ubiquitin-conjugating enzyme E2C [Source:HGNC Symbol;Acc:15937] [ENSECAT00000015457]
ens|ubiquitin-conjugating enzyme E2C [Source:HGNC Symbol;Acc:15937] [ENSECAT00000015457]
ens|ubiquitin-conjugating enzyme E2C [Source:HGNC Symbol;Acc:15937] [ENSECAT00000015457]
ens|ubiquitin-conjugating enzyme E2C [Source:HGNC Symbol;Acc:15937] [ENSECAT00000015457]
ens|cathepsin A [Source:HGNC Symbol;Acc:9251] [ENSECAT00000005323]
ens|aurora kinase A [Source:HGNC Symbol;Acc:11393] [ENSECAT00000025786]

ens|prostate transmembrane protein, androgen induced 1 [Source:HGNC Symbol;Acc:14107] [ENSECAT00000019
ens|cathepsin Z [Source:HGNC Symbol;Acc:2547] [ENSECAT00000026952]
ens|cathepsin Z [Source:HGNC Symbol;Acc:2547] [ENSECAT00000026952]
ens|cathepsin Z [Source:HGNC Symbol;Acc:2547] [ENSECAT00000026952]
ens|cathepsin L2 [Source:HGNC Symbol;Acc:2538] [ENSECAT00000006084]
ens|fructose-1,6-bisphosphatase 1 [Source:HGNC Symbol;Acc:3606] [ENSECAT00000022959]
ens|fructose-1,6-bisphosphatase 1 [Source:HGNC Symbol;Acc:3606] [ENSECAT00000022959]
ens|cathepsin L1 [Source:HGNC Symbol;Acc:2537] [ENSECAT00000007651]
ens|Uncharacterized protein [Source:UniProtKB/TrEMBL;Acc:F7AM91] [ENSECAT00000019643]
ens|Uncharacterized protein [Source:UniProtKB/TrEMBL;Acc:F6V1R7] [ENSECAT00000022254]
ens|transducin-like enhancer of split 1 (E(sp1) homolog, Drosophila) [Source:HGNC Symbol;Acc:11837] [ENSECAT(
ens|transducin-like enhancer of split 1 (E(sp1) homolog, Drosophila) [Source:HGNC Symbol;Acc:11837] [ENSECAT(
ref|Equus caballus annexin A1 (ANXA1), mRNA [NM_001081867]
ref|Equus caballus annexin A1 (ANXA1), mRNA [NM_001081867]
ens|dedicator of cytokinesis 8 [Source:HGNC Symbol;Acc:19191] [ENSECAT00000013338]
ens|leucine rich adaptor protein 1-like [Source:HGNC Symbol;Acc:31452] [ENSECAT00000008515]
ens|leucine rich adaptor protein 1-like [Source:HGNC Symbol;Acc:31452] [ENSECAT00000008515]
ens|Uncharacterized protein [Source:UniProtKB/TrEMBL;Acc:F6Q8J9] [ENSECAT00000018738]
ens|sema domain, immunoglobulin domain (Ig), transmembrane domain (TM) and short cytoplasmic domain, (ser
ens|WNK lysine deficient protein kinase 2 [Source:HGNC Symbol;Acc:14542] [ENSECAT00000021815]
ens|ninjurin 1 [Source:HGNC Symbol;Acc:7824] [ENSECAT00000014910]
ens|Uncharacterized protein [Source:UniProtKB/TrEMBL;Acc:F6YX25] [ENSECAT00000017902]
ens|homer homolog 3 (Drosophila) [Source:HGNC Symbol;Acc:17514] [ENSECAT00000024809]
ens|cyclin B1 [Source:HGNC Symbol;Acc:1579] [ENSECAT00000016855]
ens|cyclin B1 [Source:HGNC Symbol;Acc:1579] [ENSECAT00000016855]
ens|ankyrin repeat domain 55 [Source:HGNC Symbol;Acc:25681] [ENSECAT00000016705]
ens|glutathione peroxidase 8 (putative) [Source:HGNC Symbol;Acc:33100] [ENSECAT00000024915]
ens|integrin, alpha 2 (CD49B, alpha 2 subunit of VLA-2 receptor) [Source:HGNC Symbol;Acc:6137] [ENSECAT0000(
ens|integrin, alpha 2 (CD49B, alpha 2 subunit of VLA-2 receptor) [Source:HGNC Symbol;Acc:6137] [ENSECAT0000(
ens|integrin, alpha 2 (CD49B, alpha 2 subunit of VLA-2 receptor) [Source:HGNC Symbol;Acc:6137] [ENSECAT0000(
ens|integrin, alpha 2 (CD49B, alpha 2 subunit of VLA-2 receptor) [Source:HGNC Symbol;Acc:6137] [ENSECAT0000(
ens|integrin, alpha 2 (CD49B, alpha 2 subunit of VLA-2 receptor) [Source:HGNC Symbol;Acc:6137] [ENSECAT0000(
ens|integrin, alpha 2 (CD49B, alpha 2 subunit of VLA-2 receptor) [Source:HGNC Symbol;Acc:6137] [ENSECAT0000(
ens|chemokine (C-C motif) ligand 28 [Source:HGNC Symbol;Acc:17700] [ENSECAT00000008721]
ens|Succinyl-CoA:3-ketoacid-coenzyme A transferase [Source:UniProtKB/TrEMBL;Acc:F7A396] [ENSECAT0000002
ens|Succinyl-CoA:3-ketoacid-coenzyme A transferase [Source:UniProtKB/TrEMBL;Acc:F7A396] [ENSECAT0000002
ens|disabled homolog 2, mitogen-responsive phosphoprotein (Drosophila) [Source:HGNC Symbol;Acc:2662] [ENSI
ens|golgi integral membrane protein 4 [Source:HGNC Symbol;Acc:15448] [ENSECAT00000017635]
ens|protein kinase C, iota [Source:HGNC Symbol;Acc:9404] [ENSECAT00000015325]
ens|protein kinase C, iota [Source:HGNC Symbol;Acc:9404] [ENSECAT00000015325]
ens|tumor necrosis factor (ligand) superfamily, member 10 [Source:HGNC Symbol;Acc:11925] [ENSECAT0000002(
ens|epithelial cell transforming sequence 2 oncogene [Source:HGNC Symbol;Acc:3155] [ENSECAT00000015540]
ens|alpha-2-HS-glycoprotein [Source:HGNC Symbol;Acc:349] [ENSECAT00000015850]
ens|replication factor C (activator 1) 4, 37kDa [Source:HGNC Symbol;Acc:9972] [ENSECAT00000024262]
ens|B-cell CLL/lymphoma 6 [Source:HGNC Symbol;Acc:1001] [ENSECAT00000005687]
ens|B-cell CLL/lymphoma 6 [Source:HGNC Symbol;Acc:1001] [ENSECAT00000005687]
ens|apolipoprotein D [Source:HGNC Symbol;Acc:612] [ENSECAT00000023547]
ens|apolipoprotein D [Source:HGNC Symbol;Acc:612] [ENSECAT00000023547]

ens|cystatin A (stefin A) [Source:HGNC Symbol;Acc:2481] [ENSECAT00000025834]
ens|cystatin A (stefin A) [Source:HGNC Symbol;Acc:2481] [ENSECAT00000025834]
ens|cystatin A (stefin A) [Source:HGNC Symbol;Acc:2481] [ENSECAT00000025834]
ens|coiled-coil domain containing 80 [Source:HGNC Symbol;Acc:30649] [ENSECAT00000021180]
ens|transgelin 3 [Source:HGNC Symbol;Acc:29868] [ENSECAT00000010210]
ens|transgelin 3 [Source:HGNC Symbol;Acc:29868] [ENSECAT00000010210]
ens|collagen, type VIII, alpha 1 [Source:HGNC Symbol;Acc:2215] [ENSECAT00000020647]
ens|ST3 beta-galactoside alpha-2,3-sialyltransferase 6 [Source:HGNC Symbol;Acc:18080] [ENSECAT00000010985]
ens|protein phosphatase 1, regulatory subunit 27 [Source:HGNC Symbol;Acc:16813] [ENSECAT00000008089]
ens|Uncharacterized protein [Source:UniProtKB/TrEMBL;Acc:F6TQ61] [ENSECAT00000008638]
ens|chromosome 17 open reading frame 99 [Source:HGNC Symbol;Acc:34490] [ENSECAT00000008492]
ens|transmembrane channel-like 6 [Source:HGNC Symbol;Acc:18021] [ENSECAT00000021801]
gb|TSA: Equus caballus contig15419.EqcaPBMC mRNA sequence. [JL630556]
gb|TSA: Equus caballus contig15419.EqcaPBMC mRNA sequence. [JL630556]
ens|hematological and neurological expressed 1 [Source:HGNC Symbol;Acc:14569] [ENSECAT00000020042]
ens|hematological and neurological expressed 1 [Source:HGNC Symbol;Acc:14569] [ENSECAT00000020042]
ens|hematological and neurological expressed 1 [Source:HGNC Symbol;Acc:14569] [ENSECAT00000020042]
ens|hematological and neurological expressed 1 [Source:HGNC Symbol;Acc:14569] [ENSECAT00000020042]
ens|hematological and neurological expressed 1 [Source:HGNC Symbol;Acc:14569] [ENSECAT00000020042]
ens|hematological and neurological expressed 1 [Source:HGNC Symbol;Acc:14569] [ENSECAT00000020042]
ens|G protein-coupled receptor, family C, group 5, member C [Source:HGNC Symbol;Acc:13309] [ENSECAT00000000000]
ens|apolipoprotein H (beta-2-glycoprotein I) [Source:HGNC Symbol;Acc:616] [ENSECAT00000023786]
ens|apolipoprotein H (beta-2-glycoprotein I) [Source:HGNC Symbol;Acc:616] [ENSECAT00000023786]
ens|karyopherin alpha 2 (RAG cohort 1, importin alpha 1) [Source:HGNC Symbol;Acc:6395] [ENSECAT0000002205]
ens|intercellular adhesion molecule 2 [Source:HGNC Symbol;Acc:5345] [ENSECAT00000000375]
ens|frizzled family receptor 2 [Source:HGNC Symbol;Acc:4040] [ENSECAT00000018635]
ens|ets variant 4 [Source:HGNC Symbol;Acc:3493] [ENSECAT00000016571]
ens|amine oxidase, copper containing 2 (retina-specific) [Source:HGNC Symbol;Acc:549] [ENSECAT00000012011]
ens|topoisomerase (DNA) II alpha 170kDa [Source:HGNC Symbol;Acc:11989] [ENSECAT00000014604]
ens|coatamer protein complex, subunit zeta 2 [Source:HGNC Symbol;Acc:19356] [ENSECAT00000026387]
ens|serine carboxypeptidase 1 [Source:HGNC Symbol;Acc:29507] [ENSECAT00000006651]
ens|carbonic anhydrase IV [Source:HGNC Symbol;Acc:1375] [ENSECAT00000024391]
ens|Uncharacterized protein [Source:UniProtKB/TrEMBL;Acc:F6TC33] [ENSECAT00000024713]
ens|Uncharacterized protein [Source:UniProtKB/TrEMBL;Acc:F6TC33] [ENSECAT00000024713]
ens|Uncharacterized protein [Source:UniProtKB/TrEMBL;Acc:F6TC33] [ENSECAT00000024713]
ens|Uncharacterized protein [Source:UniProtKB/TrEMBL;Acc:F6TC33] [ENSECAT00000024713]
ens|Uncharacterized protein [Source:UniProtKB/TrEMBL;Acc:F6TC33] [ENSECAT00000024713]
ens|Uncharacterized protein [Source:UniProtKB/TrEMBL;Acc:F6RLX6] [ENSECAT00000026717]
ens|Uncharacterized protein [Source:UniProtKB/TrEMBL;Acc:F6RLX6] [ENSECAT00000026717]
ens|Uncharacterized protein [Source:UniProtKB/TrEMBL;Acc:F6RLX6] [ENSECAT00000026717]
ens|Uncharacterized protein [Source:UniProtKB/TrEMBL;Acc:F6RLX6] [ENSECAT00000026717]
ens|Uncharacterized protein [Source:UniProtKB/TrEMBL;Acc:F6RLX6] [ENSECAT00000026717]
ens|Uncharacterized protein [Source:UniProtKB/TrEMBL;Acc:F6V881] [ENSECAT00000016984]
ens|solute carrier family 46 (folate transporter), member 1 [Source:HGNC Symbol;Acc:30521] [ENSECAT00000006]
ens|Uncharacterized protein [Source:UniProtKB/TrEMBL;Acc:F6TT45] [ENSECAT00000016554]
ens|Uncharacterized protein [Source:UniProtKB/TrEMBL;Acc:F6TT45] [ENSECAT00000016554]
ens|EF-hand calcium binding domain 5 [Source:HGNC Symbol;Acc:24801] [ENSECAT00000016280]
ens|carboxypeptidase D [Source:HGNC Symbol;Acc:2301] [ENSECAT00000022002]

ens|family with sequence similarity 101, member B [Source:HGNC Symbol;Acc:28705] [ENSECAT00000008882]
ens|DPH1 homolog (S. cerevisiae) [Source:HGNC Symbol;Acc:3003] [ENSECAT00000026336]
ens|glycolipid transfer protein domain containing 2 [Source:HGNC Symbol;Acc:33756] [ENSECAT00000017237]
ens|arachidonate 12-lipoxygenase [Source:HGNC Symbol;Acc:429] [ENSECAT00000023641]
ens|arachidonate 12-lipoxygenase [Source:HGNC Symbol;Acc:429] [ENSECAT00000023641]
ens|arachidonate 12-lipoxygenase [Source:HGNC Symbol;Acc:429] [ENSECAT00000023641]
ens|arachidonate 12-lipoxygenase [Source:HGNC Symbol;Acc:429] [ENSECAT00000023641]
ens|aurora kinase B [Source:HGNC Symbol;Acc:11390] [ENSECAT00000015240]
ens|aldehyde dehydrogenase 3 family, member A2 [Source:HGNC Symbol;Acc:403] [ENSECAT00000012764]
ens|phosphatidylethanolamine N-methyltransferase [Source:HGNC Symbol;Acc:8830] [ENSECAT00000021845]
ens|serpin peptidase inhibitor, clade B (ovalbumin), member 9 [Source:HGNC Symbol;Acc:8955] [ENSECAT00000000000]
ens|NAD(P)H dehydrogenase, quinone 2 [Source:HGNC Symbol;Acc:7856] [ENSECAT00000008719]
ens|NAD(P)H dehydrogenase, quinone 2 [Source:HGNC Symbol;Acc:7856] [ENSECAT00000008719]
ens|NAD(P)H dehydrogenase, quinone 2 [Source:HGNC Symbol;Acc:7856] [ENSECAT00000008719]
ens|NAD(P)H dehydrogenase, quinone 2 [Source:HGNC Symbol;Acc:7856] [ENSECAT00000008719]
ens|NAD(P)H dehydrogenase, quinone 2 [Source:HGNC Symbol;Acc:7856] [ENSECAT00000008719]
ens|neural precursor cell expressed, developmentally down-regulated 9 [Source:HGNC Symbol;Acc:7733] [ENSECAT00000000000]
ens|Uncharacterized protein [Source:UniProtKB/TrEMBL;Acc:F7C548] [ENSECAT00000015816]
ens|Uncharacterized protein [Source:UniProtKB/TrEMBL;Acc:F7C548] [ENSECAT00000015816]
ens|Uncharacterized protein [Source:UniProtKB/TrEMBL;Acc:F7C548] [ENSECAT00000015816]
ens|Uncharacterized protein [Source:UniProtKB/TrEMBL;Acc:F7C548] [ENSECAT00000015816]
ens|myosin regulatory light chain interacting protein [Source:HGNC Symbol;Acc:21155] [ENSECAT00000021397]
ens|myosin regulatory light chain interacting protein [Source:HGNC Symbol;Acc:21155] [ENSECAT00000021397]
ens|ring finger protein 144B [Source:HGNC Symbol;Acc:21578] [ENSECAT0000002824]
ens|ring finger protein 144B [Source:HGNC Symbol;Acc:21578] [ENSECAT0000002824]
ens|ring finger protein 144B [Source:HGNC Symbol;Acc:21578] [ENSECAT0000002824]
ens|membrane bound O-acyltransferase domain containing 1 [Source:HGNC Symbol;Acc:21579] [ENSECAT00000000000]
ens|histone cluster 1, H1a [Source:HGNC Symbol;Acc:4715] [ENSECAT00000002727]
ens|histone cluster 1, H1a [Source:HGNC Symbol;Acc:4715] [ENSECAT00000002727]
ens|Histone H2A [Source:UniProtKB/TrEMBL;Acc:F7CJPO] [ENSECAT00000006025]
ens|Histone H2A [Source:UniProtKB/TrEMBL;Acc:F7CJPO] [ENSECAT00000007891]
ens|Uncharacterized protein [Source:UniProtKB/TrEMBL;Acc:F6RHP4] [ENSECAT00000011411]
ens|Uncharacterized protein [Source:UniProtKB/TrEMBL;Acc:F6XA91] [ENSECAT00000025925]
ens|Uncharacterized protein [Source:UniProtKB/TrEMBL;Acc:F7ANY5] [ENSECAT00000012113]
ens|transcription factor 19 [Source:HGNC Symbol;Acc:11629] [ENSECAT00000007981]
ens|Uncharacterized protein [Source:UniProtKB/TrEMBL;Acc:F7DB76] [ENSECAT00000011275]
ens|Uncharacterized protein [Source:UniProtKB/TrEMBL;Acc:F7AH72] [ENSECAT00000018358]
ens|Uncharacterized protein [Source:UniProtKB/TrEMBL;Acc:F7BN88] [ENSECAT00000020228]
ens|Uncharacterized protein [Source:UniProtKB/TrEMBL;Acc:F6XUK2] [ENSECAT00000023286]
ens|Uncharacterized protein [Source:UniProtKB/TrEMBL;Acc:F6PSQ2] [ENSECAT00000004388]
ens|Uncharacterized protein [Source:UniProtKB/TrEMBL;Acc:F6ZR75] [ENSECAT00000014949]
ens|apolipoprotein M [Source:HGNC Symbol;Acc:13916] [ENSECAT00000016768]
ens|Uncharacterized protein [Source:UniProtKB/TrEMBL;Acc:F7CG96] [ENSECAT00000021011]
ref|Equus caballus MHC class II DQ-alpha chain (DQA), mRNA [NM_001142812]
ref|Equus caballus MHC class II DQ-alpha (DQA), mRNA [NM_001142814]
ens|proteasome (prosome, macropain) subunit, beta type, 8 (large multifunctional peptidase 7) [Source:HGNC Symbol;Acc:43] [ENSECAT00000000000]
ens|transporter 1, ATP-binding cassette, sub-family B (MDR/TAP) [Source:HGNC Symbol;Acc:43] [ENSECAT00000000000]

ens|proteasome (prosome, macropain) subunit, beta type, 9 (large multifunctional peptidase 2) [Source:HGNC Sy
ens|proteasome (prosome, macropain) subunit, beta type, 9 (large multifunctional peptidase 2) [Source:HGNC Sy
ens|proteasome (prosome, macropain) subunit, beta type, 9 (large multifunctional peptidase 2) [Source:HGNC Sy
ens|proteasome (prosome, macropain) subunit, beta type, 9 (large multifunctional peptidase 2) [Source:HGNC Sy
ens|proteasome (prosome, macropain) subunit, beta type, 9 (large multifunctional peptidase 2) [Source:HGNC Sy
ens|kinesin family member C1 [Source:HGNC Symbol;Acc:6389] [ENSECAT00000026020]
ens|kinesin family member C1 [Source:HGNC Symbol;Acc:6389] [ENSECAT00000026020]
ens|kinesin family member C1 [Source:HGNC Symbol;Acc:6389] [ENSECAT00000026020]
ens|kinesin family member C1 [Source:HGNC Symbol;Acc:6389] [ENSECAT00000026020]
ens|kinesin family member C1 [Source:HGNC Symbol;Acc:6389] [ENSECAT00000026020]
ens|tubby like protein 1 [Source:HGNC Symbol;Acc:12423] [ENSECAT00000007685]
ens|cyclin D3 [Source:HGNC Symbol;Acc:1585] [ENSECAT00000025618]
ens|phospholipase A2, group VII (platelet-activating factor acetylhydrolase, plasma) [Source:HGNC Symbol;Acc:9C
ens|phospholipase A2, group VII (platelet-activating factor acetylhydrolase, plasma) [Source:HGNC Symbol;Acc:9C
ens|minichromosome maintenance complex component 3 [Source:HGNC Symbol;Acc:6945] [ENSECAT000000222
ens|minichromosome maintenance complex component 3 [Source:HGNC Symbol;Acc:6945] [ENSECAT000000222
ref|Equus caballus progesterin and adipoQ receptor family member VIII (PAQR8), mRNA [NM_001256979]
ens|Glutathione S-transferase [Source:UniProtKB/TrEMBL;Acc:F7BYI3] [ENSECAT00000021387]
ens|Glutathione S-transferase [Source:UniProtKB/TrEMBL;Acc:F7BHA2] [ENSECAT00000014334]
ens|Glutathione S-transferase [Source:UniProtKB/TrEMBL;Acc:F6QBZ9] [ENSECAT00000019255]
ens|glial cells missing homolog 1 (Drosophila) [Source:HGNC Symbol;Acc:4197] [ENSECAT00000014886]
ens|glial cells missing homolog 1 (Drosophila) [Source:HGNC Symbol;Acc:4197] [ENSECAT00000014886]
ens|glial cells missing homolog 1 (Drosophila) [Source:HGNC Symbol;Acc:4197] [ENSECAT00000014886]
ens|crystallin, lambda 1 [Source:HGNC Symbol;Acc:18246] [ENSECAT00000006173]
ens|crystallin, lambda 1 [Source:HGNC Symbol;Acc:18246] [ENSECAT00000006173]
ens|spindle and kinetochore associated complex subunit 3 [Source:HGNC Symbol;Acc:20262] [ENSECAT00000015
ens|microtubule associated tumor suppressor candidate 2 [Source:HGNC Symbol;Acc:20595] [ENSECAT00000014
ens|furry homolog (Drosophila) [Source:HGNC Symbol;Acc:20367] [ENSECAT00000015925]
ens|furry homolog (Drosophila) [Source:HGNC Symbol;Acc:20367] [ENSECAT00000015925]
ens|replication factor C (activator 1) 3, 38kDa [Source:HGNC Symbol;Acc:9971] [ENSECAT00000023000]
ens|periostin, osteoblast specific factor [Source:HGNC Symbol;Acc:16953] [ENSECAT00000025899]
ens|periostin, osteoblast specific factor [Source:HGNC Symbol;Acc:16953] [ENSECAT00000025899]
ens|cytoskeleton associated protein 2 [Source:HGNC Symbol;Acc:1990] [ENSECAT00000018991]
ens|WD repeat and FYVE domain containing 2 [Source:HGNC Symbol;Acc:20482] [ENSECAT00000000267]
ens|emopamil binding protein-like [Source:HGNC Symbol;Acc:18061] [ENSECAT00000022628]
ens|lymphocyte cytosolic protein 1 (L-plastin) [Source:HGNC Symbol;Acc:6528] [ENSECAT00000025030]
ens|regulator of cell cycle [Source:HGNC Symbol;Acc:20369] [ENSECAT00000013679]
ens|Uncharacterized protein [Source:UniProtKB/TrEMBL;Acc:F7API3] [ENSECAT00000014800]
ens|Kruppel-like factor 5 (intestinal) [Source:HGNC Symbol;Acc:6349] [ENSECAT00000010895]
ens|SLIT and NTRK-like family, member 6 [Source:HGNC Symbol;Acc:23503] [ENSECAT00000013950]
ens|citrate lyase beta like [Source:HGNC Symbol;Acc:18355] [ENSECAT00000016962]
ens|citrate lyase beta like [Source:HGNC Symbol;Acc:18355] [ENSECAT00000016962]
ens|collagen, type IV, alpha 1 [Source:HGNC Symbol;Acc:2202] [ENSECAT00000022446]
ens|protein Z, vitamin K-dependent plasma glycoprotein [Source:HGNC Symbol;Acc:9460] [ENSECAT00000026626
ens|macrophage receptor with collagenous structure [Source:HGNC Symbol;Acc:6895] [ENSECAT00000012884]
ens|kynureninase [Source:HGNC Symbol;Acc:6469] [ENSECAT00000019639]
ens|phospholipase A2 receptor 1, 180kDa [Source:HGNC Symbol;Acc:9042] [ENSECAT00000025890]

ens|phospholipase A2 receptor 1, 180kDa [Source:HGNC Symbol;Acc:9042] [ENSECAT00000025890]
ens|dipeptidyl-peptidase 4 [Source:HGNC Symbol;Acc:3009] [ENSECAT00000019851]
ens|COBL-like 1 [Source:HGNC Symbol;Acc:23571] [ENSECAT00000027104]
ens|SPC25, NDC80 kinetochore complex component, homolog (S. cerevisiae) [Source:HGNC Symbol;Acc:24031] [E
ens|SPC25, NDC80 kinetochore complex component, homolog (S. cerevisiae) [Source:HGNC Symbol;Acc:24031] [E
ens|low density lipoprotein receptor-related protein 2 [Source:HGNC Symbol;Acc:6694] [ENSECAT00000005992]
ens|integrin, alpha 6 [Source:HGNC Symbol;Acc:6142] [ENSECAT00000006140]
ens|collagen, type V, alpha 2 [Source:HGNC Symbol;Acc:2210] [ENSECAT00000011989]
ens|collagen, type V, alpha 2 [Source:HGNC Symbol;Acc:2210] [ENSECAT00000011989]
ens|nucleic acid binding protein 1 [Source:HGNC Symbol;Acc:26232] [ENSECAT00000017708]
ens|nucleic acid binding protein 1 [Source:HGNC Symbol;Acc:26232] [ENSECAT00000017708]
ens|SATB homeobox 2 [Source:HGNC Symbol;Acc:21637] [ENSECAT00000010520]
ens|SATB homeobox 2 [Source:HGNC Symbol;Acc:21637] [ENSECAT00000010520]
ens|SATB homeobox 2 [Source:HGNC Symbol;Acc:21637] [ENSECAT00000010520]
ens|SATB homeobox 2 [Source:HGNC Symbol;Acc:21637] [ENSECAT00000010520]
ens|SATB homeobox 2 [Source:HGNC Symbol;Acc:21637] [ENSECAT00000010520]
ens|ATPase, H+ transporting, lysosomal 38kDa, V0 subunit d2 [Source:HGNC Symbol;Acc:18266] [ENSECAT000000
ens|fatty acid binding protein 12 [Source:HGNC Symbol;Acc:34524] [ENSECAT00000025214]
ens|fatty acid binding protein 4, adipocyte [Source:HGNC Symbol;Acc:3559] [ENSECAT00000025544]
ens|fatty acid binding protein 5 (psoriasis-associated) [Source:HGNC Symbol;Acc:3560] [ENSECAT00000009105]
ens|zinc finger and BTB domain containing 10 [Source:HGNC Symbol;Acc:30953] [ENSECAT00000013604]
ens|zinc finger and BTB domain containing 10 [Source:HGNC Symbol;Acc:30953] [ENSECAT00000013604]
ens|zinc finger homeobox 4 [Source:HGNC Symbol;Acc:30939] [ENSECAT00000024150]
ens|zinc finger homeobox 4 [Source:HGNC Symbol;Acc:30939] [ENSECAT00000024150]
ens|somatomedin B and thrombospondin, type 1 domain containing [Source:HGNC Symbol;Acc:30362] [ENSECAT
ens|v-yes-1 Yamaguchi sarcoma viral related oncogene homolog [Source:HGNC Symbol;Acc:6735] [ENSECAT00000
ens|lysosomal protein transmembrane 4 beta [Source:HGNC Symbol;Acc:13646] [ENSECAT00000021412]
ens|collagen triple helix repeat containing 1 [Source:HGNC Symbol;Acc:18831] [ENSECAT00000021751]
ens|angiopoietin 1 [Source:HGNC Symbol;Acc:484] [ENSECAT00000017990]
ens|angiopoietin 1 [Source:HGNC Symbol;Acc:484] [ENSECAT00000017990]
ens|thyrotropin-releasing hormone receptor [Source:HGNC Symbol;Acc:12299] [ENSECAT00000024774]
ens|collectin sub-family member 10 (C-type lectin) [Source:HGNC Symbol;Acc:2220] [ENSECAT00000019417]
ens|nephroblastoma overexpressed [Source:HGNC Symbol;Acc:7885] [ENSECAT00000024697]
ens|ectonucleotide pyrophosphatase/phosphodiesterase 2 [Source:HGNC Symbol;Acc:3357] [ENSECAT000000064
ens|KH domain containing, RNA binding, signal transduction associated 3 [Source:HGNC Symbol;Acc:18117] [ENSE
ens|KH domain containing, RNA binding, signal transduction associated 3 [Source:HGNC Symbol;Acc:18117] [ENSE
ens|cyclin E1 [Source:HGNC Symbol;Acc:1589] [ENSECAT00000022912]
ens|carbohydrate (N-acetyl)galactosamine 4-O sulfotransferase 8 [Source:HGNC Symbol;Acc:15993] [ENSECAT000
ens|Uncharacterized protein [Source:UniProtKB/TrEMBL;Acc:F6UF44] [ENSECAT00000008293]
ens|Uncharacterized protein [Source:UniProtKB/TrEMBL;Acc:F6UF44] [ENSECAT00000008293]
ens|Uncharacterized protein [Source:UniProtKB/TrEMBL;Acc:F6UF44] [ENSECAT00000008293]
ens|Uncharacterized protein [Source:UniProtKB/TrEMBL;Acc:F6UF44] [ENSECAT00000008293]
ens|Uncharacterized protein [Source:UniProtKB/TrEMBL;Acc:F6UF44] [ENSECAT00000008293]
ens|free fatty acid receptor 2 [Source:HGNC Symbol;Acc:4501] [ENSECAT00000005110]
ens|uroplakin 1A [Source:HGNC Symbol;Acc:12577] [ENSECAT00000013556]
ens|protein phosphatase 1, regulatory (inhibitor) subunit 14A [Source:HGNC Symbol;Acc:14871] [ENSECAT000000
ens|F-box protein 27 [Source:HGNC Symbol;Acc:18753] [ENSECAT00000014387]

ens|cyclin D2 [Source:HGNC Symbol;Acc:1583] [ENSECAT00000013282]
ens|G protein-coupled receptor 162 [Source:HGNC Symbol;Acc:16693] [ENSECAT00000020397]
ens|G protein-coupled receptor 162 [Source:HGNC Symbol;Acc:16693] [ENSECAT00000020397]
ens|G protein-coupled receptor 162 [Source:HGNC Symbol;Acc:16693] [ENSECAT00000020397]
ens|G protein-coupled receptor 162 [Source:HGNC Symbol;Acc:16693] [ENSECAT00000020397]
ens|G protein-coupled receptor 162 [Source:HGNC Symbol;Acc:16693] [ENSECAT00000020397]
ens|Uncharacterized protein [Source:UniProtKB/TrEMBL;Acc:F7CCE4] [ENSECAT00000015129]
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ens|Uncharacterized protein [Source:UniProtKB/TrEMBL;Acc:F7CCE4] [ENSECAT00000015129]
ens|alpha-2-macroglobulin [Source:HGNC Symbol;Acc:7] [ENSECAT00000013620]
ens|alpha-2-macroglobulin [Source:HGNC Symbol;Acc:7] [ENSECAT00000013620]
ens|matrix Gla protein [Source:HGNC Symbol;Acc:7060] [ENSECAT00000011027]
ens|matrix Gla protein [Source:HGNC Symbol;Acc:7060] [ENSECAT00000011027]
ens|microsomal glutathione S-transferase 1 [Source:HGNC Symbol;Acc:7061] [ENSECAT00000022028]
ens|serine/threonine kinase 38 like [Source:HGNC Symbol;Acc:17848] [ENSECAT00000025617]
ens|serine/threonine kinase 38 like [Source:HGNC Symbol;Acc:17848] [ENSECAT00000025617]
ens|kinesin family member 21A [Source:HGNC Symbol;Acc:19349] [ENSECAT00000026246]
ens|FK506 binding protein 11, 19 kDa [Source:HGNC Symbol;Acc:18624] [ENSECAT00000006768]
ens|FK506 binding protein 11, 19 kDa [Source:HGNC Symbol;Acc:18624] [ENSECAT00000006768]
ens|FK506 binding protein 11, 19 kDa [Source:HGNC Symbol;Acc:18624] [ENSECAT00000006768]
ens|FK506 binding protein 11, 19 kDa [Source:HGNC Symbol;Acc:18624] [ENSECAT00000006768]
ens|FK506 binding protein 11, 19 kDa [Source:HGNC Symbol;Acc:18624] [ENSECAT00000006768]
ens|tubulin, alpha 1a [Source:HGNC Symbol;Acc:20766] [ENSECAT00000014577]
ens|tubulin, alpha 1a [Source:HGNC Symbol;Acc:20766] [ENSECAT00000014577]
ens|tubulin, alpha 1a [Source:HGNC Symbol;Acc:20766] [ENSECAT00000014577]
ens|tubulin, alpha 1c [Source:HGNC Symbol;Acc:20768] [ENSECAT00000009703]
ens|tubulin, alpha 1c [Source:HGNC Symbol;Acc:20768] [ENSECAT00000009703]
ens|NCK-associated protein 5-like [Source:HGNC Symbol;Acc:29321] [ENSECAT00000020212]
ens|NCK-associated protein 5-like [Source:HGNC Symbol;Acc:29321] [ENSECAT00000020212]
ens|NCK-associated protein 5-like [Source:HGNC Symbol;Acc:29321] [ENSECAT00000020212]
ens|NCK-associated protein 5-like [Source:HGNC Symbol;Acc:29321] [ENSECAT00000020212]
ens|NCK-associated protein 5-like [Source:HGNC Symbol;Acc:29321] [ENSECAT00000020212]
ens|bridging integrator 2 [Source:HGNC Symbol;Acc:1053] [ENSECAT00000009299]
ens|retinoic acid receptor, gamma [Source:HGNC Symbol;Acc:9866] [ENSECAT00000017808]
ens|retinoic acid receptor, gamma [Source:HGNC Symbol;Acc:9866] [ENSECAT00000017808]
ens|retinoic acid receptor, gamma [Source:HGNC Symbol;Acc:9866] [ENSECAT00000017808]
ens|retinoic acid receptor, gamma [Source:HGNC Symbol;Acc:9866] [ENSECAT00000017808]
ens|myosin, light chain 6, alkali, smooth muscle and non-muscle [Source:HGNC Symbol;Acc:7587] [ENSECAT00000000000]
ens|Uncharacterized protein [Source:UniProtKB/TrEMBL;Acc:F7AUH2] [ENSECAT00000020332]
ens|Uncharacterized protein [Source:UniProtKB/TrEMBL;Acc:F6UJ79] [ENSECAT00000022537]
ens|Uncharacterized protein [Source:UniProtKB/TrEMBL;Acc:F6UJ79] [ENSECAT00000022537]
ens|Uncharacterized protein [Source:UniProtKB/TrEMBL;Acc:F6UJ79] [ENSECAT00000022537]
ens|Uncharacterized protein [Source:UniProtKB/TrEMBL;Acc:F6UJ79] [ENSECAT00000022537]
ens|Uncharacterized protein [Source:UniProtKB/TrEMBL;Acc:F6UJ79] [ENSECAT00000022537]
ens|interleukin 22 [Source:HGNC Symbol;Acc:14900] [ENSECAT00000020804]

ens|interleukin 22 [Source:HGNC Symbol;Acc:14900] [ENSECAT00000020804]
ens|interleukin 22 [Source:HGNC Symbol;Acc:14900] [ENSECAT00000020804]
ens|RAP1B, member of RAS oncogene family [Source:HGNC Symbol;Acc:9857] [ENSECAT00000005448]
ens|RAP1B, member of RAS oncogene family [Source:HGNC Symbol;Acc:9857] [ENSECAT00000005448]
ens|carboxypeptidase M [Source:HGNC Symbol;Acc:2311] [ENSECAT00000015977]
ens|Uncharacterized protein [Source:UniProtKB/TrEMBL;Acc:F6YHV2] [ENSECAT00000003347]
ens|EGF domain-specific O-linked N-acetylglucosamine (GlcNAc) transferase [Source:HGNC Symbol;Acc:28526] [E
ens|family with sequence similarity 208, member A [Source:HGNC Symbol;Acc:30314] [ENSECAT00000010119]
ens|family with sequence similarity 208, member A [Source:HGNC Symbol;Acc:30314] [ENSECAT00000010119]
ens|aminolevulinate, delta-, synthase 1 [Source:HGNC Symbol;Acc:396] [ENSECAT00000015453]
ens|aminolevulinate, delta-, synthase 1 [Source:HGNC Symbol;Acc:396] [ENSECAT00000015453]
ens|aminolevulinate, delta-, synthase 1 [Source:HGNC Symbol;Acc:396] [ENSECAT00000015453]
ens|aminolevulinate, delta-, synthase 1 [Source:HGNC Symbol;Acc:396] [ENSECAT00000015453]
ens|aminolevulinate, delta-, synthase 1 [Source:HGNC Symbol;Acc:396] [ENSECAT00000015453]
ens|plexin B1 [Source:HGNC Symbol;Acc:9103] [ENSECAT00000015985]
ens|kinesin family member 15 [Source:HGNC Symbol;Acc:17273] [ENSECAT00000016447]
ens|kinesin family member 15 [Source:HGNC Symbol;Acc:17273] [ENSECAT00000016447]
ens|ectonucleoside triphosphate diphosphohydrolase 3 [Source:HGNC Symbol;Acc:3365] [ENSECAT00000018886]
ens|leucine rich repeat (in FLII) interacting protein 2 [Source:HGNC Symbol;Acc:6703] [ENSECAT00000022910]
ens|leucine rich repeat containing 3B [Source:HGNC Symbol;Acc:28105] [ENSECAT00000023795]
ens|phospholipase C-like 2 [Source:HGNC Symbol;Acc:9064] [ENSECAT00000010359]
ens|phospholipase C-like 2 [Source:HGNC Symbol;Acc:9064] [ENSECAT00000010359]
ens|RAB6B, member RAS oncogene family [Source:HGNC Symbol;Acc:14902] [ENSECAT00000026634]
ens|RAB6B, member RAS oncogene family [Source:HGNC Symbol;Acc:14902] [ENSECAT00000026634]
ens|RAB6B, member RAS oncogene family [Source:HGNC Symbol;Acc:14902] [ENSECAT00000026634]
ens|RAB6B, member RAS oncogene family [Source:HGNC Symbol;Acc:14902] [ENSECAT00000026634]
ens|RAB6B, member RAS oncogene family [Source:HGNC Symbol;Acc:14902] [ENSECAT00000026634]
ens|solute carrier organic anion transporter family, member 2A1 [Source:HGNC Symbol;Acc:10955] [ENSECAT000
ens|muscle RAS oncogene homolog [Source:HGNC Symbol;Acc:7227] [ENSECAT00000019828]
ens|muscle RAS oncogene homolog [Source:HGNC Symbol;Acc:7227] [ENSECAT00000019828]
ens|muscle RAS oncogene homolog [Source:HGNC Symbol;Acc:7227] [ENSECAT00000019828]
ens|muscle RAS oncogene homolog [Source:HGNC Symbol;Acc:7227] [ENSECAT00000019828]
ens|muscle RAS oncogene homolog [Source:HGNC Symbol;Acc:7227] [ENSECAT00000019828]
ens|retinol binding protein 1, cellular [Source:HGNC Symbol;Acc:9919] [ENSECAT00000021741]
ens|retinol binding protein 1, cellular [Source:HGNC Symbol;Acc:9919] [ENSECAT00000021741]
ens|retinol binding protein 1, cellular [Source:HGNC Symbol;Acc:9919] [ENSECAT00000021741]
ens|retinol binding protein 1, cellular [Source:HGNC Symbol;Acc:9919] [ENSECAT00000021741]
ens|retinol binding protein 1, cellular [Source:HGNC Symbol;Acc:9919] [ENSECAT00000021741]
ens|procollagen C-endopeptidase enhancer 2 [Source:HGNC Symbol;Acc:8739] [ENSECAT00000021960]
ens|procollagen-lysine, 2-oxoglutarate 5-dioxygenase 2 [Source:HGNC Symbol;Acc:9082] [ENSECAT00000010371]
ens|procollagen-lysine, 2-oxoglutarate 5-dioxygenase 2 [Source:HGNC Symbol;Acc:9082] [ENSECAT00000010371]
ens|Uncharacterized protein [Source:UniProtKB/TrEMBL;Acc:F6S4G6] [ENSECAT00000018547]
ens|Uncharacterized protein [Source:UniProtKB/TrEMBL;Acc:F6S4G6] [ENSECAT00000018547]
ens|profilin 2 [Source:HGNC Symbol;Acc:8882] [ENSECAT00000026660]
ens|profilin 2 [Source:HGNC Symbol;Acc:8882] [ENSECAT00000026660]
ens|profilin 2 [Source:HGNC Symbol;Acc:8882] [ENSECAT00000026660]
ens|profilin 2 [Source:HGNC Symbol;Acc:8882] [ENSECAT00000026660]

ens|profilin 2 [Source:HGNC Symbol;Acc:8882] [ENSECAT00000026660]
ens|arylacetylamide deacetylase [Source:HGNC Symbol;Acc:17] [ENSECAT00000025896]
ens|septin 10 [Source:HGNC Symbol;Acc:14349] [ENSECAT00000015542]
ens|sulfotransferase family, cytosolic, 1C, member 4 [Source:HGNC Symbol;Acc:11457] [ENSECAT00000009643]
ref|Equus caballus chromosome 2 open reading frame 40 (C15H2orf40), mRNA [NM_001242543]
ens|non-SMC condensin I complex, subunit H [Source:HGNC Symbol;Acc:1112] [ENSECAT00000009163]
ens|Uncharacterized protein [Source:UniProtKB/TrEMBL;Acc:F7CYE1] [ENSECAT00000015366]
ens|Uncharacterized protein [Source:UniProtKB/TrEMBL;Acc:F6Y3W5] [ENSECAT00000017968]
ens|budding uninhibited by benzimidazoles 1 homolog (yeast) [Source:HGNC Symbol;Acc:1148] [ENSECAT00000000000]
ens|budding uninhibited by benzimidazoles 1 homolog (yeast) [Source:HGNC Symbol;Acc:1148] [ENSECAT00000000000]
ens|solute carrier family 20 (phosphate transporter), member 1 [Source:HGNC Symbol;Acc:10946] [ENSECAT00000000000]
ens|fatty acid binding protein 1, liver [Source:HGNC Symbol;Acc:3555] [ENSECAT00000016740]
ens|fatty acid binding protein 1, liver [Source:HGNC Symbol;Acc:3555] [ENSECAT00000016740]
ens|fatty acid binding protein 1, liver [Source:HGNC Symbol;Acc:3555] [ENSECAT00000016740]
ens|fatty acid binding protein 1, liver [Source:HGNC Symbol;Acc:3555] [ENSECAT00000016740]
ens|fatty acid binding protein 1, liver [Source:HGNC Symbol;Acc:3555] [ENSECAT00000016740]
ens|SMYD family member 5 [Source:HGNC Symbol;Acc:16258] [ENSECAT00000024171]
ens|UDP-glucose pyrophosphorylase 2 [Source:HGNC Symbol;Acc:12527] [ENSECAT00000017951]
ens|UDP-glucose pyrophosphorylase 2 [Source:HGNC Symbol;Acc:12527] [ENSECAT00000017951]
ens|protein phosphatase 1, regulatory subunit 21 [Source:HGNC Symbol;Acc:30595] [ENSECAT00000022186]
ens|protein phosphatase 1, regulatory subunit 21 [Source:HGNC Symbol;Acc:30595] [ENSECAT00000022186]
ens|solute carrier family 3 (cystine, dibasic and neutral amino acid transporters, activator of cystine, dibasic and n
ens|solute carrier family 3 (cystine, dibasic and neutral amino acid transporters, activator of cystine, dibasic and n
ens|cytochrome P450, family 1, subfamily B, polypeptide 1 [Source:HGNC Symbol;Acc:2597] [ENSECAT000000207
ens|cytochrome P450, family 1, subfamily B, polypeptide 1 [Source:HGNC Symbol;Acc:2597] [ENSECAT000000207
ens|cytochrome P450, family 1, subfamily B, polypeptide 1 [Source:HGNC Symbol;Acc:2597] [ENSECAT000000207
ens|cytochrome P450, family 1, subfamily B, polypeptide 1 [Source:HGNC Symbol;Acc:2597] [ENSECAT000000207
ens|cytochrome P450, family 1, subfamily B, polypeptide 1 [Source:HGNC Symbol;Acc:2597] [ENSECAT000000207
ens|glutaminy-peptide cyclotransferase [Source:HGNC Symbol;Acc:9753] [ENSECAT00000024478]
ens|glutaminy-peptide cyclotransferase [Source:HGNC Symbol;Acc:9753] [ENSECAT00000024478]
ens|ribokinase [Source:HGNC Symbol;Acc:30325] [ENSECAT00000021899]
ens|carbamoyl-phosphate synthetase 2, aspartate transcarbamylase, and dihydroorotase [Source:HGNC Symbol;A
ens|FK506 binding protein 1B, 12.6 kDa [Source:HGNC Symbol;Acc:3712] [ENSECAT00000016475]
ens|FK506 binding protein 1B, 12.6 kDa [Source:HGNC Symbol;Acc:3712] [ENSECAT00000016475]
ens|FK506 binding protein 1B, 12.6 kDa [Source:HGNC Symbol;Acc:3712] [ENSECAT00000016475]
ens|hippocalcin-like 1 [Source:HGNC Symbol;Acc:5145] [ENSECAT00000006160]
ens|ribonucleotide reductase M2 [Source:HGNC Symbol;Acc:10452] [ENSECAT00000007941]
ens|inhibitor of DNA binding 2, dominant negative helix-loop-helix protein [Source:HGNC Symbol;Acc:5361] [ENSE
ens|acireductone dioxygenase 1 [Source:HGNC Symbol;Acc:30576] [ENSECAT00000005716]
ens|peroxidasin homolog (Drosophila) [Source:HGNC Symbol;Acc:14966] [ENSECAT00000021391]
ens|PDZ and LIM domain 7 (enigma) [Source:HGNC Symbol;Acc:22958] [ENSECAT00000024189]
ens|PDZ and LIM domain 7 (enigma) [Source:HGNC Symbol;Acc:22958] [ENSECAT00000024189]
ens|PDZ and LIM domain 7 (enigma) [Source:HGNC Symbol;Acc:22958] [ENSECAT00000024189]
ens|PDZ and LIM domain 7 (enigma) [Source:HGNC Symbol;Acc:22958] [ENSECAT00000024189]
ens|PDZ and LIM domain 7 (enigma) [Source:HGNC Symbol;Acc:22958] [ENSECAT00000024189]
ens|msh homeobox 2 [Source:HGNC Symbol;Acc:7392] [ENSECAT00000012167]
ens|msh homeobox 2 [Source:HGNC Symbol;Acc:7392] [ENSECAT00000012167]

ens|msh homeobox 2 [Source:HGNC Symbol;Acc:7392] [ENSECAT00000012167]
ens|msh homeobox 2 [Source:HGNC Symbol;Acc:7392] [ENSECAT00000012167]
ens|msh homeobox 2 [Source:HGNC Symbol;Acc:7392] [ENSECAT00000012167]
ens|hyaluronan-mediated motility receptor (RHAMM) [Source:HGNC Symbol;Acc:5012] [ENSECAT00000009167]
ens|hyaluronan-mediated motility receptor (RHAMM) [Source:HGNC Symbol;Acc:5012] [ENSECAT00000009167]
ens|actin filament associated protein 1-like 1 [Source:HGNC Symbol;Acc:26714] [ENSECAT00000011276]
ens|actin binding LIM protein family, member 3 [Source:HGNC Symbol;Acc:29132] [ENSECAT00000017610]
ens|dihydropyrimidinase-like 3 [Source:HGNC Symbol;Acc:3015] [ENSECAT00000022158]
ens|early growth response 1 [Source:HGNC Symbol;Acc:3238] [ENSECAT00000014965]
ens|kinesin family member 20A [Source:HGNC Symbol;Acc:9787] [ENSECAT00000018112]
ens|chemokine (C-X-C motif) ligand 14 [Source:HGNC Symbol;Acc:10640] [ENSECAT00000009969]
ens|chemokine (C-X-C motif) ligand 14 [Source:HGNC Symbol;Acc:10640] [ENSECAT00000009969]
ens|chemokine (C-X-C motif) ligand 14 [Source:HGNC Symbol;Acc:10640] [ENSECAT00000009969]
ens|chemokine (C-X-C motif) ligand 14 [Source:HGNC Symbol;Acc:10640] [ENSECAT00000009969]
ens|chemokine (C-X-C motif) ligand 14 [Source:HGNC Symbol;Acc:10640] [ENSECAT00000009969]
ens|solute carrier family 27 (fatty acid transporter), member 6 [Source:HGNC Symbol;Acc:11000] [ENSECAT00000000000]
ens|lysyl oxidase [Source:HGNC Symbol;Acc:6664] [ENSECAT00000015502]
ens|neuronal regeneration related protein homolog (rat) [Source:HGNC Symbol;Acc:16834] [ENSECAT00000016369]
ens|neuronal regeneration related protein homolog (rat) [Source:HGNC Symbol;Acc:16834] [ENSECAT00000016369]
ens|chromosome 5 open reading frame 30 [Source:HGNC Symbol;Acc:25052] [ENSECAT00000017369]
ens|chromosome 5 open reading frame 30 [Source:HGNC Symbol;Acc:25052] [ENSECAT00000017369]
ens|Rho-related BTB domain containing 3 [Source:HGNC Symbol;Acc:18757] [ENSECAT00000026534]
ens|Rho-related BTB domain containing 3 [Source:HGNC Symbol;Acc:18757] [ENSECAT00000026534]
ens|transmembrane protein 171 [Source:HGNC Symbol;Acc:27031] [ENSECAT00000025279]
ens|transmembrane protein 171 [Source:HGNC Symbol;Acc:27031] [ENSECAT00000025279]
ens|transmembrane protein 171 [Source:HGNC Symbol;Acc:27031] [ENSECAT00000025279]
ens|Uncharacterized protein [Source:UniProtKB/TrEMBL;Acc:F6VPI8] [ENSECAT00000022458]
ens|X-box binding protein 1 [Source:HGNC Symbol;Acc:12801] [ENSECAT00000015549]
ens|coronin, actin binding protein, 1C [Source:HGNC Symbol;Acc:2254] [ENSECAT00000020838]
ens|ORAI calcium release-activated calcium modulator 1 [Source:HGNC Symbol;Acc:25896] [ENSECAT00000013458]
ens|erythrocyte membrane protein band 4.1-like 3 [Source:HGNC Symbol;Acc:3380] [ENSECAT00000015885]
ens|erythrocyte membrane protein band 4.1-like 3 [Source:HGNC Symbol;Acc:3380] [ENSECAT00000015885]
ens|Uncharacterized protein [Source:UniProtKB/TrEMBL;Acc:F7CHV5] [ENSECAT00000019415]
ens|collectin sub-family member 12 [Source:HGNC Symbol;Acc:16016] [ENSECAT00000020273]
ens|collectin sub-family member 12 [Source:HGNC Symbol;Acc:16016] [ENSECAT00000020273]
ens|NDC80 kinetochore complex component homolog (*S. cerevisiae*) [Source:HGNC Symbol;Acc:16909] [ENSECAT00000000000]
ens|TAF4b RNA polymerase II, TATA box binding protein (TBP)-associated factor, 105kDa [Source:HGNC Symbol;Acc:12405] [ENSECAT00000016739]
ens|TAF4b RNA polymerase II, TATA box binding protein (TBP)-associated factor, 105kDa [Source:HGNC Symbol;Acc:12405] [ENSECAT00000016739]
ens|transthyretin [Source:HGNC Symbol;Acc:12405] [ENSECAT00000016739]
ens|transthyretin [Source:HGNC Symbol;Acc:12405] [ENSECAT00000016739]
ens|transthyretin [Source:HGNC Symbol;Acc:12405] [ENSECAT00000016739]
ens|transthyretin [Source:HGNC Symbol;Acc:12405] [ENSECAT00000016739]
ens|transthyretin [Source:HGNC Symbol;Acc:12405] [ENSECAT00000016739]
ens|methyl-CpG binding domain protein 2 [Source:HGNC Symbol;Acc:6917] [ENSECAT00000023955]
ens|CNDP dipeptidase 2 (metallopeptidase M20 family) [Source:HGNC Symbol;Acc:24437] [ENSECAT00000020236]
ens|CNDP dipeptidase 2 (metallopeptidase M20 family) [Source:HGNC Symbol;Acc:24437] [ENSECAT00000020236]
ens|CNDP dipeptidase 2 (metallopeptidase M20 family) [Source:HGNC Symbol;Acc:24437] [ENSECAT00000020236]

ens|CNDP dipeptidase 2 (metallopeptidase M20 family) [Source:HGNC Symbol;Acc:24437] [ENSECAT00000020236]
ens|CNDP dipeptidase 2 (metallopeptidase M20 family) [Source:HGNC Symbol;Acc:24437] [ENSECAT00000020236]
ens|carnosine dipeptidase 1 (metallopeptidase M20 family) [Source:HGNC Symbol;Acc:20675] [ENSECAT00000020236]
ens|Uncharacterized protein [Source:UniProtKB/TrEMBL;Acc:F7DI43] [ENSECAT00000007453]
ens|Uncharacterized protein [Source:UniProtKB/TrEMBL;Acc:F7DI43] [ENSECAT00000007453]
ens|Uncharacterized protein [Source:UniProtKB/TrEMBL;Acc:F7DI43] [ENSECAT00000007453]
ens|transducin-like enhancer of split 2 (E(sp1) homolog, Drosophila) [Source:HGNC Symbol;Acc:11838] [ENSECAT00000007453]
ens|CD320 molecule [Source:HGNC Symbol;Acc:16692] [ENSECAT00000014171]
ens|chromosome 11 open reading frame 93 [Source:HGNC Symbol;Acc:26978] [ENSECAT00000010536]
ens|chromosome 11 open reading frame 93 [Source:HGNC Symbol;Acc:26978] [ENSECAT00000010536]
ens|chromosome 11 open reading frame 93 [Source:HGNC Symbol;Acc:26978] [ENSECAT00000010536]
ens|chromosome 11 open reading frame 93 [Source:HGNC Symbol;Acc:26978] [ENSECAT00000010536]
ens|chromosome 11 open reading frame 93 [Source:HGNC Symbol;Acc:26978] [ENSECAT00000010536]
ens|Uncharacterized protein [Source:UniProtKB/TrEMBL;Acc:F6PY96] [ENSECAT00000013201]
ens|zinc finger and BTB domain containing 16 [Source:HGNC Symbol;Acc:12930] [ENSECAT00000026213]
ens|cell adhesion molecule 1 [Source:HGNC Symbol;Acc:5951] [ENSECAT00000016154]
ens|cell adhesion molecule 1 [Source:HGNC Symbol;Acc:5951] [ENSECAT00000016154]
ens|apolipoprotein A-I [Source:HGNC Symbol;Acc:600] [ENSECAT00000009963]
ens|Uncharacterized protein [Source:UniProtKB/TrEMBL;Acc:F7DWX8] [ENSECAT00000000664]
ens|CD3e molecule, epsilon (CD3-TCR complex) [Source:HGNC Symbol;Acc:1674] [ENSECAT00000015408]
ens|Thy-1 cell surface antigen [Source:HGNC Symbol;Acc:11801] [ENSECAT00000010192]
ens|solute carrier family 37 (glycerol-3-phosphate transporter), member 2 [Source:HGNC Symbol;Acc:20644] [ENSECAT00000010192]
ens|Uncharacterized protein [Source:UniProtKB/TrEMBL;Acc:F6WUB0] [ENSECAT00000017579]
ens|non-SMC condensin II complex, subunit D3 [Source:HGNC Symbol;Acc:28952] [ENSECAT00000019679]
ens|deoxyribonuclease II, lysosomal [Source:HGNC Symbol;Acc:2960] [ENSECAT00000020211]
ens|mannosidase, alpha, class 2B, member 1 [Source:HGNC Symbol;Acc:6826] [ENSECAT00000024553]
ref|Equus caballus acid phosphatase 5, tartrate resistant (ACP5), mRNA [NM_001246672]
ens|dedicator of cytokinesis 6 [Source:HGNC Symbol;Acc:19189] [ENSECAT00000024771]
ens|folate hydrolase (prostate-specific membrane antigen) 1 [Source:HGNC Symbol;Acc:3788] [ENSECAT00000024771]
ens|protease, serine, 23 [Source:HGNC Symbol;Acc:14370] [ENSECAT00000005511]
ens|protease, serine, 23 [Source:HGNC Symbol;Acc:14370] [ENSECAT00000005511]
ens|malic enzyme 3, NADP(+)-dependent, mitochondrial [Source:HGNC Symbol;Acc:6985] [ENSECAT00000008696]
ens|odz, odd Oz/ten-m homolog 4 (Drosophila) [Source:HGNC Symbol;Acc:29945] [ENSECAT00000009190]
ens|potassium channel tetramerisation domain containing 14 [Source:HGNC Symbol;Acc:23295] [ENSECAT00000009190]
ens|potassium channel tetramerisation domain containing 14 [Source:HGNC Symbol;Acc:23295] [ENSECAT00000009190]
ens|potassium channel tetramerisation domain containing 14 [Source:HGNC Symbol;Acc:23295] [ENSECAT00000009190]
ens|potassium channel tetramerisation domain containing 14 [Source:HGNC Symbol;Acc:23295] [ENSECAT00000009190]
ens|potassium channel tetramerisation domain containing 14 [Source:HGNC Symbol;Acc:23295] [ENSECAT00000009190]
ens|Uncharacterized protein [Source:UniProtKB/TrEMBL;Acc:F7D0Z1] [ENSECAT00000001250]
ens|Uncharacterized protein [Source:UniProtKB/TrEMBL;Acc:F7A0H6] [ENSECAT00000019764]
ens|Uncharacterized protein [Source:UniProtKB/TrEMBL;Acc:F7DI80] [ENSECAT00000021165]
ens|LIM domain only 1 (rhombotin 1) [Source:HGNC Symbol;Acc:6641] [ENSECAT00000021530]
ens|nuclear receptor interacting protein 3 [Source:HGNC Symbol;Acc:1167] [ENSECAT00000010118]
ens|signal peptide, CUB domain, EGF-like 2 [Source:HGNC Symbol;Acc:30425] [ENSECAT00000010627]
ens|signal peptide, CUB domain, EGF-like 2 [Source:HGNC Symbol;Acc:30425] [ENSECAT00000010627]
ens|signal peptide, CUB domain, EGF-like 2 [Source:HGNC Symbol;Acc:30425] [ENSECAT00000010627]
ens|signal peptide, CUB domain, EGF-like 2 [Source:HGNC Symbol;Acc:30425] [ENSECAT00000010627]

ens|signal peptide, CUB domain, EGF-like 2 [Source:HGNC Symbol;Acc:30425] [ENSECAT00000010627]
ens|Uncharacterized protein [Source:UniProtKB/TrEMBL;Acc:F7D192] [ENSECAT00000001241]
ens|pleckstrin homology domain containing, family A member 7 [Source:HGNC Symbol;Acc:27049] [ENSECAT000000000000]
ens|E2F transcription factor 8 [Source:HGNC Symbol;Acc:24727] [ENSECAT00000017372]
ens|E2F transcription factor 8 [Source:HGNC Symbol;Acc:24727] [ENSECAT00000017372]
ens|E2F transcription factor 8 [Source:HGNC Symbol;Acc:24727] [ENSECAT00000017372]
ens|E2F transcription factor 8 [Source:HGNC Symbol;Acc:24727] [ENSECAT00000017372]
ens|solute carrier family 5 (sodium/glucose cotransporter), member 12 [Source:HGNC Symbol;Acc:28750] [ENSECAT000000000000]
ens|BTG family, member 2 [Source:HGNC Symbol;Acc:1131] [ENSECAT00000018126]
ens|peptidase M20 domain containing 1 [Source:HGNC Symbol;Acc:26518] [ENSECAT00000008762]
ens|peptidase M20 domain containing 1 [Source:HGNC Symbol;Acc:26518] [ENSECAT00000008762]
ens|peptidase M20 domain containing 1 [Source:HGNC Symbol;Acc:26518] [ENSECAT00000008762]
ens|peptidase M20 domain containing 1 [Source:HGNC Symbol;Acc:26518] [ENSECAT00000008762]
ens|peptidase M20 domain containing 1 [Source:HGNC Symbol;Acc:26518] [ENSECAT00000008762]
ens|Uncharacterized protein [Source:UniProtKB/TrEMBL;Acc:F7BNQ2] [ENSECAT00000014288]
ens|Uncharacterized protein [Source:UniProtKB/TrEMBL;Acc:F6ZD61] [ENSECAT00000024165]
ens|myelin protein zero-like 1 [Source:HGNC Symbol;Acc:7226] [ENSECAT00000007097]
ens|myelin protein zero-like 1 [Source:HGNC Symbol;Acc:7226] [ENSECAT00000007097]
ens|myelin protein zero-like 1 [Source:HGNC Symbol;Acc:7226] [ENSECAT00000007097]
ens|myelin protein zero-like 1 [Source:HGNC Symbol;Acc:7226] [ENSECAT00000007097]
ens|adenylate cyclase 10 (soluble) [Source:HGNC Symbol;Acc:21285] [ENSECAT00000012979]
ens|Uncharacterized protein [Source:UniProtKB/TrEMBL;Acc:F7DZ01] [ENSECAT00000007031]
ens|Uncharacterized protein [Source:UniProtKB/TrEMBL;Acc:F7DZ01] [ENSECAT00000007031]
ens|flavin containing monooxygenase 2 (non-functional) [Source:HGNC Symbol;Acc:3770] [ENSECAT00000022644]
ens|flavin containing monooxygenase 1 [Source:HGNC Symbol;Acc:3769] [ENSECAT00000006433]
ens|structural maintenance of chromosomes 4 [Source:HGNC Symbol;Acc:14013] [ENSECAT00000024113]
ens|N-acetylneuraminidase 1 [Source:HGNC Symbol;Acc:16781] [ENSECAT000000000000]
ens|chromosome 1 open reading frame 21 [Source:HGNC Symbol;Acc:15494] [ENSECAT00000019326]
ens|influenza virus NS1A binding protein [Source:HGNC Symbol;Acc:16951] [ENSECAT00000020493]
ens|SET and MYND domain containing 2 [Source:HGNC Symbol;Acc:20982] [ENSECAT00000023764]
ens|lysophosphatidylglycerol acyltransferase 1 [Source:HGNC Symbol;Acc:28985] [ENSECAT00000013964]
ens|lysophosphatidylglycerol acyltransferase 1 [Source:HGNC Symbol;Acc:28985] [ENSECAT00000013964]
ens|G0/G1switch 2 [Source:HGNC Symbol;Acc:30229] [ENSECAT00000003375]
ens|Uncharacterized protein [Source:UniProtKB/TrEMBL;Acc:F6T4E1] [ENSECAT00000008402]
ens|plexin A2 [Source:HGNC Symbol;Acc:9100] [ENSECAT00000005858]
ens|plexin A2 [Source:HGNC Symbol;Acc:9100] [ENSECAT00000005858]
ens|plexin A2 [Source:HGNC Symbol;Acc:9100] [ENSECAT00000005858]
ens|plexin A2 [Source:HGNC Symbol;Acc:9100] [ENSECAT00000005858]
ens|plexin A2 [Source:HGNC Symbol;Acc:9100] [ENSECAT00000005858]
ens|aldehyde dehydrogenase 9 family, member A1 [Source:HGNC Symbol;Acc:412] [ENSECAT00000013622]
ens|microsomal glutathione S-transferase 3 [Source:HGNC Symbol;Acc:7064] [ENSECAT00000023787]
ens|microsomal glutathione S-transferase 3 [Source:HGNC Symbol;Acc:7064] [ENSECAT00000023787]
ens|microsomal glutathione S-transferase 3 [Source:HGNC Symbol;Acc:7064] [ENSECAT00000023787]
ens|NUF2, NDC80 kinetochore complex component, homolog (S. cerevisiae) [Source:HGNC Symbol;Acc:14621] [ENSECAT000000000000]
ens|UDP-N-acetylglucosamine pyrophosphorylase 1 [Source:HGNC Symbol;Acc:12457] [ENSECAT00000023658]
ens|Fc fragment of IgE, high affinity I, receptor for; gamma polypeptide [Source:HGNC Symbol;Acc:3611] [ENSECAT000000000000]
ens|S100 calcium binding protein A1 [Source:HGNC Symbol;Acc:10486] [ENSECAT00000024606]

ens|S100 calcium binding protein A13 [Source:HGNC Symbol;Acc:10490] [ENSECAT00000025793]
ens|S100 calcium binding protein A14 [Source:HGNC Symbol;Acc:18901] [ENSECAT00000026499]
ens|S100 calcium binding protein A4 [Source:HGNC Symbol;Acc:10494] [ENSECAT00000008288]
ens|S100 calcium binding protein A12 [Source:HGNC Symbol;Acc:10489] [ENSECAT00000009966]
ens|S100 calcium binding protein A12 [Source:HGNC Symbol;Acc:10489] [ENSECAT00000009966]
ens|S100 calcium binding protein A12 [Source:HGNC Symbol;Acc:10489] [ENSECAT00000009966]
ens|S100 calcium binding protein A12 [Source:HGNC Symbol;Acc:10489] [ENSECAT00000009966]
ens|S100 calcium binding protein A12 [Source:HGNC Symbol;Acc:10489] [ENSECAT00000009966]
ens|extracellular matrix protein 1 [Source:HGNC Symbol;Acc:3153] [ENSECAT00000009053]
ens|extracellular matrix protein 1 [Source:HGNC Symbol;Acc:3153] [ENSECAT00000009053]
ens|extracellular matrix protein 1 [Source:HGNC Symbol;Acc:3153] [ENSECAT00000009053]
ens|extracellular matrix protein 1 [Source:HGNC Symbol;Acc:3153] [ENSECAT00000009053]
ens|extracellular matrix protein 1 [Source:HGNC Symbol;Acc:3153] [ENSECAT00000009053]
ens|family with sequence similarity 46, member C [Source:HGNC Symbol;Acc:24712] [ENSECAT00000020819]
ens|family with sequence similarity 46, member C [Source:HGNC Symbol;Acc:24712] [ENSECAT00000020819]
ens|proline/serine-rich coiled-coil 1 [Source:HGNC Symbol;Acc:24472] [ENSECAT00000017407]
ens|proline/serine-rich coiled-coil 1 [Source:HGNC Symbol;Acc:24472] [ENSECAT00000017407]
ens|proline/serine-rich coiled-coil 1 [Source:HGNC Symbol;Acc:24472] [ENSECAT00000017407]
ens|proline/serine-rich coiled-coil 1 [Source:HGNC Symbol;Acc:24472] [ENSECAT00000017407]
ens|HEN1 methyltransferase homolog 1 (Arabidopsis) [Source:HGNC Symbol;Acc:26400] [ENSECAT00000006762]
ens|family with sequence similarity 102, member B [Source:HGNC Symbol;Acc:27637] [ENSECAT00000008346]
ens|vav 3 guanine nucleotide exchange factor [Source:HGNC Symbol;Acc:12659] [ENSECAT00000012045]
ens|vav 3 guanine nucleotide exchange factor [Source:HGNC Symbol;Acc:12659] [ENSECAT00000012045]
ens|transmembrane protein 56 [Source:HGNC Symbol;Acc:26477] [ENSECAT00000020515]
ens|coagulation factor III (thromboplastin, tissue factor) [Source:HGNC Symbol;Acc:3541] [ENSECAT00000025195]
ens|glutamate-cysteine ligase, modifier subunit [Source:HGNC Symbol;Acc:4312] [ENSECAT00000023413]
ens|guanylate binding protein family, member 6 [Source:HGNC Symbol;Acc:25395] [ENSECAT00000013954]
ens|guanylate binding protein family, member 6 [Source:HGNC Symbol;Acc:25395] [ENSECAT00000013954]
ens|cysteine-rich, angiogenic inducer, 61 [Source:HGNC Symbol;Acc:2654] [ENSECAT00000026966]
ens|cysteine-rich, angiogenic inducer, 61 [Source:HGNC Symbol;Acc:2654] [ENSECAT00000026966]
ens|chitinase, di-N-acetyl- [Source:HGNC Symbol;Acc:2496] [ENSECAT00000016564]
ens|chitinase, di-N-acetyl- [Source:HGNC Symbol;Acc:2496] [ENSECAT00000016564]
ens|cystathionase (cystathionine gamma-lyase) [Source:HGNC Symbol;Acc:2501] [ENSECAT00000016030]
ens|guanine nucleotide binding protein (G protein), gamma 12 [Source:HGNC Symbol;Acc:19663] [ENSECAT00000000000]
ens|growth arrest and DNA-damage-inducible, alpha [Source:HGNC Symbol;Acc:4095] [ENSECAT00000015222]
ens|solute carrier family 35 (UDP-glucuronic acid/UDP-N-acetylgalactosamine dual transporter), member D1 [Sou
ens|CD36 molecule (thrombospondin receptor) [Source:HGNC Symbol;Acc:1663] [ENSECAT00000016213]
ens|CD36 molecule (thrombospondin receptor) [Source:HGNC Symbol;Acc:1663] [ENSECAT00000016213]
ens|guanine nucleotide binding protein (G protein), alpha inhibiting activity polypeptide 1 [Source:HGNC Symbol;
ens|laminin, beta 1 [Source:HGNC Symbol;Acc:6486] [ENSECAT00000009530]
ens|myosin, light chain 7, regulatory [Source:HGNC Symbol;Acc:21719] [ENSECAT00000020126]
ens|dopa decarboxylase (aromatic L-amino acid decarboxylase) [Source:HGNC Symbol;Acc:2719] [ENSECAT00000000000]
ens|sema domain, immunoglobulin domain (Ig), short basic domain, secreted, (semaphorin) 3E [Source:HGNC Syr
ens|Uncharacterized protein [Source:UniProtKB/TrEMBL;Acc:F6TQN7] [ENSECAT00000024982]
ens|guanine nucleotide binding protein (G protein), gamma 11 [Source:HGNC Symbol;Acc:4403] [ENSECAT00000000000]
ens|guanine nucleotide binding protein (G protein), gamma 11 [Source:HGNC Symbol;Acc:4403] [ENSECAT00000000000]
ens|guanine nucleotide binding protein (G protein), gamma 11 [Source:HGNC Symbol;Acc:4403] [ENSECAT00000000000]

ens|guanine nucleotide binding protein (G protein), gamma 11 [Source:HGNC Symbol;Acc:4403] [ENSECAT000000]
ens|sarcoglycan, epsilon [Source:HGNC Symbol;Acc:10808] [ENSECAT00000021679]
ens|paraoxonase 3 [Source:HGNC Symbol;Acc:9206] [ENSECAT00000010224]
ens|paraoxonase 2 [Source:HGNC Symbol;Acc:9205] [ENSECAT00000010997]
ens|tachykinin, precursor 1 [Source:HGNC Symbol;Acc:11517] [ENSECAT00000003114]
ens|anterior gradient 3 homolog (Xenopus laevis) [Source:HGNC Symbol;Acc:24167] [ENSECAT00000012711]
ens|3-hydroxyisobutyrate dehydrogenase [Source:HGNC Symbol;Acc:4907] [ENSECAT00000018010]
ens|carboxypeptidase, vitellogenic-like [Source:HGNC Symbol;Acc:14399] [ENSECAT00000026759]
ens|carboxypeptidase, vitellogenic-like [Source:HGNC Symbol;Acc:14399] [ENSECAT00000026759]
ens|Uncharacterized protein [Source:UniProtKB/TrEMBL;Acc:F6WM25] [ENSECAT00000009387]
ens|mesoderm specific transcript homolog (mouse) [Source:HGNC Symbol;Acc:7028] [ENSECAT00000023423]
ens|mesoderm specific transcript homolog (mouse) [Source:HGNC Symbol;Acc:7028] [ENSECAT00000023423]
ens|solute carrier family 13 (sodium/sulfate symporters), member 4 [Source:HGNC Symbol;Acc:15827] [ENSECAT00000023423]
ens|solute carrier family 13 (sodium/sulfate symporters), member 4 [Source:HGNC Symbol;Acc:15827] [ENSECAT00000023423]
ens|pleiotrophin [Source:HGNC Symbol;Acc:9630] [ENSECAT00000000474]
ens|pleiotrophin [Source:HGNC Symbol;Acc:9630] [ENSECAT00000000474]
ens|pleiotrophin [Source:HGNC Symbol;Acc:9630] [ENSECAT00000000474]
ens|pleiotrophin [Source:HGNC Symbol;Acc:9630] [ENSECAT00000000474]
ens|pleiotrophin [Source:HGNC Symbol;Acc:9630] [ENSECAT00000000474]
ens|aldo-keto reductase family 1, member D1 (delta 4-3-ketosteroid-5-beta-reductase) [Source:HGNC Symbol;Acc:866] [ENSECAT00000018643]
ens|aldo-keto reductase family 1, member D1 (delta 4-3-ketosteroid-5-beta-reductase) [Source:HGNC Symbol;Acc:866] [ENSECAT00000018643]
ens|ATPase, H+ transporting, lysosomal V0 subunit a4 [Source:HGNC Symbol;Acc:866] [ENSECAT00000018643]
ens|ATPase, H+ transporting, lysosomal V0 subunit a4 [Source:HGNC Symbol;Acc:866] [ENSECAT00000018643]
ens|transmembrane protein 139 [Source:HGNC Symbol;Acc:22058] [ENSECAT00000003584]
ens|transmembrane protein 139 [Source:HGNC Symbol;Acc:22058] [ENSECAT00000003584]
ens|transmembrane protein 139 [Source:HGNC Symbol;Acc:22058] [ENSECAT00000003584]
ens|transmembrane protein 139 [Source:HGNC Symbol;Acc:22058] [ENSECAT00000003584]
ens|transmembrane protein 139 [Source:HGNC Symbol;Acc:22058] [ENSECAT00000003584]
ens|zyxin [Source:HGNC Symbol;Acc:13200] [ENSECAT00000021816]
ens|family with sequence similarity 115, member A [Source:HGNC Symbol;Acc:22201] [ENSECAT00000018561]
ens|family with sequence similarity 115, member A [Source:HGNC Symbol;Acc:22201] [ENSECAT00000018561]
ens|SHC SH2-domain binding protein 1 [Source:HGNC Symbol;Acc:29547] [ENSECAT00000000344]
ens|glutamic pyruvate transaminase (alanine aminotransferase) 2 [Source:HGNC Symbol;Acc:18062] [ENSECAT000000001640]
ens|glutamic pyruvate transaminase (alanine aminotransferase) 2 [Source:HGNC Symbol;Acc:18062] [ENSECAT000000001640]
ens|glutamic pyruvate transaminase (alanine aminotransferase) 2 [Source:HGNC Symbol;Acc:18062] [ENSECAT000000001640]
ens|glutamic pyruvate transaminase (alanine aminotransferase) 2 [Source:HGNC Symbol;Acc:18062] [ENSECAT000000001640]
ens|glutamic pyruvate transaminase (alanine aminotransferase) 2 [Source:HGNC Symbol;Acc:18062] [ENSECAT000000001640]
ens|iroquois homeobox 3 [Source:HGNC Symbol;Acc:14360] [ENSECAT00000025189]
ens|Metallothionein [Source:UniProtKB/TrEMBL;Acc:F7DUC3] [ENSECAT00000000277]
ens|Metallothionein [Source:UniProtKB/TrEMBL;Acc:F6VKN2] [ENSECAT000000001640]
ens|Metallothionein [Source:UniProtKB/TrEMBL;Acc:F6VKN2] [ENSECAT000000001640]
ens|Metallothionein [Source:UniProtKB/TrEMBL;Acc:F6VKN2] [ENSECAT000000001640]
ens|Metallothionein [Source:UniProtKB/TrEMBL;Acc:F6VKN2] [ENSECAT000000001640]
ens|Metallothionein [Source:UniProtKB/TrEMBL;Acc:F6VKN2] [ENSECAT000000001640]
ens|NLR family, CARD domain containing 5 [Source:HGNC Symbol;Acc:29933] [ENSECAT00000015396]
ens|G protein-coupled receptor 56 [Source:HGNC Symbol;Acc:4512] [ENSECAT00000023171]
ens|carbonic anhydrase VII [Source:HGNC Symbol;Acc:1381] [ENSECAT00000026928]

ens|prothymosin, alpha [Source:HGNC Symbol;Acc:9623] [ENSECAT00000006486]
ens|centromere protein N [Source:HGNC Symbol;Acc:30873] [ENSECAT00000001902]
ens|coactosin-like 1 (Dictyostelium) [Source:HGNC Symbol;Acc:18304] [ENSECAT00000013285]
ens|Uncharacterized protein [Source:UniProtKB/TrEMBL;Acc:F7CL32] [ENSECAT00000007589]
ens|Uncharacterized protein [Source:UniProtKB/TrEMBL;Acc:F7CL32] [ENSECAT00000007589]
ens|H2A histone family, member Z [Source:HGNC Symbol;Acc:4741] [ENSECAT00000025457]
ens|H2A histone family, member Z [Source:HGNC Symbol;Acc:4741] [ENSECAT00000025457]
ens|H2A histone family, member Z [Source:HGNC Symbol;Acc:4741] [ENSECAT00000025457]
ens|H2A histone family, member Z [Source:HGNC Symbol;Acc:4741] [ENSECAT00000025457]
ens|H2A histone family, member Z [Source:HGNC Symbol;Acc:4741] [ENSECAT00000025457]
ens|secreted phosphoprotein 1 [Source:HGNC Symbol;Acc:11255] [ENSECAT00000018317]
ens|secreted phosphoprotein 1 [Source:HGNC Symbol;Acc:11255] [ENSECAT00000018317]
ens|AF4/FMR2 family, member 1 [Source:HGNC Symbol;Acc:7135] [ENSECAT00000004716]
ens|protein tyrosine phosphatase, non-receptor type 13 (APO-1/CD95 (Fas)-associated phosphatase) [Source:HGNC Symbol;Acc:25361] [ENSECAT00000013405]
ens|Rho GTPase activating protein 24 [Source:HGNC Symbol;Acc:25361] [ENSECAT00000013405]
ens|1-acylglycerol-3-phosphate O-acyltransferase 9 [Source:HGNC Symbol;Acc:28157] [ENSECAT00000025820]
ens|Uncharacterized protein [Source:UniProtKB/TrEMBL;Acc:F7DTR9] [ENSECAT00000015211]
ens|placenta-specific 8 [Source:HGNC Symbol;Acc:19254] [ENSECAT00000015699]
ens|placenta-specific 8 [Source:HGNC Symbol;Acc:19254] [ENSECAT00000015699]
ens|annexin A3 [Source:HGNC Symbol;Acc:541] [ENSECAT00000019790]
ens|annexin A3 [Source:HGNC Symbol;Acc:541] [ENSECAT00000019790]
ens|starch binding domain 1 [Source:HGNC Symbol;Acc:24854] [ENSECAT00000025258]
ens|starch binding domain 1 [Source:HGNC Symbol;Acc:24854] [ENSECAT00000025258]
ens|neuromedin U [Source:HGNC Symbol;Acc:7859] [ENSECAT00000027153]
ens|neuromedin U [Source:HGNC Symbol;Acc:7859] [ENSECAT00000027153]
ens|neuromedin U [Source:HGNC Symbol;Acc:7859] [ENSECAT00000027153]
ens|neuromedin U [Source:HGNC Symbol;Acc:7859] [ENSECAT00000027153]
ens|FRY-like [Source:HGNC Symbol;Acc:29127] [ENSECAT00000027142]
ens|NIPA-like domain containing 1 [Source:HGNC Symbol;Acc:27194] [ENSECAT00000020757]
ens|sel-1 suppressor of lin-12-like 3 (C. elegans) [Source:HGNC Symbol;Acc:29108] [ENSECAT00000002857]
ens|peroxisome proliferator-activated receptor gamma, coactivator 1 alpha [Source:HGNC Symbol;Acc:9237] [ENSECAT00000008064]
ens|peroxisome proliferator-activated receptor gamma, coactivator 1 alpha [Source:HGNC Symbol;Acc:9237] [ENSECAT00000008064]
ens|non-SMC condensin I complex, subunit G [Source:HGNC Symbol;Acc:24304] [ENSECAT00000008064]
ens|non-SMC condensin I complex, subunit G [Source:HGNC Symbol;Acc:24304] [ENSECAT00000008064]
ens|family with sequence similarity 184, member B [Source:HGNC Symbol;Acc:29235] [ENSECAT00000014438]
ens|S100 calcium binding protein P [Source:HGNC Symbol;Acc:10504] [ENSECAT00000025766]
ens|transforming, acidic coiled-coil containing protein 3 [Source:HGNC Symbol;Acc:11524] [ENSECAT0000001184]
ens|transforming, acidic coiled-coil containing protein 3 [Source:HGNC Symbol;Acc:11524] [ENSECAT0000001184]
ens|transforming, acidic coiled-coil containing protein 3 [Source:HGNC Symbol;Acc:11524] [ENSECAT0000001184]
ens|transforming, acidic coiled-coil containing protein 3 [Source:HGNC Symbol;Acc:11524] [ENSECAT0000001184]
ens|transforming, acidic coiled-coil containing protein 3 [Source:HGNC Symbol;Acc:11524] [ENSECAT0000001184]
ens|Uncharacterized protein [Source:UniProtKB/TrEMBL;Acc:F6PNA8] [ENSECAT00000005124]
ens|ring finger protein 11 [Source:HGNC Symbol;Acc:10056] [ENSECAT00000026944]
ens|ring finger protein 11 [Source:HGNC Symbol;Acc:10056] [ENSECAT00000026944]
ens|BEN domain containing 5 [Source:HGNC Symbol;Acc:25668] [ENSECAT00000027051]
ens|BEN domain containing 5 [Source:HGNC Symbol;Acc:25668] [ENSECAT00000027051]
ens|PDZK1 interacting protein 1 [Source:HGNC Symbol;Acc:16887] [ENSECAT00000020033]

ens|Uncharacterized protein [Source:UniProtKB/TrEMBL;Acc:F6S6J4] [ENSECAT00000009072]
ens|cell division cycle 20 homolog (S. cerevisiae) [Source:HGNC Symbol;Acc:1723] [ENSECAT00000021272]
ens|CTP synthase 1 [Source:HGNC Symbol;Acc:2519] [ENSECAT00000011501]
ens|ficolin (collagen/fibrinogen domain containing) 3 (Hakata antigen) [Source:HGNC Symbol;Acc:3625] [ENSECAT00000002236]
ens|inhibitor of DNA binding 3, dominant negative helix-loop-helix protein [Source:HGNC Symbol;Acc:5362] [ENSECAT00000002236]
ens|complement component 1, q subcomponent, A chain [Source:HGNC Symbol;Acc:1241] [ENSECAT00000002236]
ens|transmembrane protein 82 [Source:HGNC Symbol;Acc:32350] [ENSECAT00000013495]
ens|dehydrogenase/reductase (SDR family) member 3 [Source:HGNC Symbol;Acc:17693] [ENSECAT00000014333]
ens|dehydrogenase/reductase (SDR family) member 3 [Source:HGNC Symbol;Acc:17693] [ENSECAT00000014333]
ens|dehydrogenase/reductase (SDR family) member 3 [Source:HGNC Symbol;Acc:17693] [ENSECAT00000014333]
ens|dehydrogenase/reductase (SDR family) member 3 [Source:HGNC Symbol;Acc:17693] [ENSECAT00000014333]
ens|dehydrogenase/reductase (SDR family) member 3 [Source:HGNC Symbol;Acc:17693] [ENSECAT00000014333]
ens|tumor necrosis factor receptor superfamily, member 1B [Source:HGNC Symbol;Acc:11917] [ENSECAT00000014333]
ens|spermidine synthase [Source:HGNC Symbol;Acc:11296] [ENSECAT00000021064]
ens|acyl-CoA thioesterase 7 [Source:HGNC Symbol;Acc:24157] [ENSECAT00000025347]
ens|family with sequence similarity 213, member B [Source:HGNC Symbol;Acc:28390] [ENSECAT00000008442]
ens|neurofilament, medium polypeptide [Source:HGNC Symbol;Acc:7734] [ENSECAT00000023905]
ens|cell division cycle associated 2 [Source:HGNC Symbol;Acc:14623] [ENSECAT00000013735]
ens|cell division cycle associated 2 [Source:HGNC Symbol;Acc:14623] [ENSECAT00000013735]
ens|PDZ binding kinase [Source:HGNC Symbol;Acc:18282] [ENSECAT00000013884]
ens|PDZ binding kinase [Source:HGNC Symbol;Acc:18282] [ENSECAT00000013884]
ens|Uncharacterized protein [Source:UniProtKB/TrEMBL;Acc:F6YWK1] [ENSECAT00000017873]
ens|Uncharacterized protein [Source:UniProtKB/TrEMBL;Acc:F6YWK1] [ENSECAT00000017873]
ens|Uncharacterized protein [Source:UniProtKB/TrEMBL;Acc:F6YWK1] [ENSECAT00000017873]
ens|Uncharacterized protein [Source:UniProtKB/TrEMBL;Acc:F6YWK1] [ENSECAT00000017873]
ens|Uncharacterized protein [Source:UniProtKB/TrEMBL;Acc:F6YWK1] [ENSECAT00000017873]
ens|Uncharacterized protein [Source:UniProtKB/TrEMBL;Acc:F6YWK1] [ENSECAT00000017928]
ens|high mobility group box 2 [Source:HGNC Symbol;Acc:5000] [ENSECAT00000010462]
ens|UDP-N-acetyl-alpha-D-galactosamine:polypeptide N-acetylgalactosaminyltransferase 7 (GalNAc-T7) [Source:HGNC Symbol;Acc:17068] [ENSECAT00000024847]
ens|UDP-N-acetyl-alpha-D-galactosamine:polypeptide N-acetylgalactosaminyltransferase 7 (GalNAc-T7) [Source:HGNC Symbol;Acc:17068] [ENSECAT00000024847]
ens|palladin, cytoskeletal associated protein [Source:HGNC Symbol;Acc:17068] [ENSECAT00000024847]
ens|palladin, cytoskeletal associated protein [Source:HGNC Symbol;Acc:17068] [ENSECAT00000024847]
ens|palladin, cytoskeletal associated protein [Source:HGNC Symbol;Acc:17068] [ENSECAT00000024847]
ens|palladin, cytoskeletal associated protein [Source:HGNC Symbol;Acc:17068] [ENSECAT00000024847]
ref|Equus caballus neuropeptide Y receptor Y5 (NPY5R), mRNA [NM_001257126]
ens|transmembrane protein 144 [Source:HGNC Symbol;Acc:25633] [ENSECAT00000017141]
ens|transmembrane protein 144 [Source:HGNC Symbol;Acc:25633] [ENSECAT00000017141]
ens|fibrinogen alpha chain [Source:HGNC Symbol;Acc:3661] [ENSECAT00000010385]
ens|FH2 domain containing 1 [Source:HGNC Symbol;Acc:29363] [ENSECAT00000023113]
ens|mab-21-like 2 (C. elegans) [Source:HGNC Symbol;Acc:6758] [ENSECAT00000004920]
ens|transmembrane protein 184C [Source:HGNC Symbol;Acc:25587] [ENSECAT00000020945]
ref|Equus caballus endothelin receptor type A (EDNRA), mRNA [NM_001159691]
ens|microsomal glutathione S-transferase 2 [Source:HGNC Symbol;Acc:7063] [ENSECAT00000020313]
ens|microsomal glutathione S-transferase 2 [Source:HGNC Symbol;Acc:7063] [ENSECAT00000020313]
ens|solute carrier family 7 (anionic amino acid transporter light chain, xc- system), member 11 [Source:HGNC Symbol;Acc:11269] [ENSECAT000000026226]
ens|sprouty homolog 1, antagonist of FGF signaling (Drosophila) [Source:HGNC Symbol;Acc:11269] [ENSECAT000000026226]
ens|cyclin A2 [Source:HGNC Symbol;Acc:1578] [ENSECAT00000026226]

ens|MAD2 mitotic arrest deficient-like 1 (yeast) [Source:HGNC Symbol;Acc:6763] [ENSECAT00000014216]
ens|glutamyl aminopeptidase (aminopeptidase A) [Source:HGNC Symbol;Acc:3355] [ENSECAT00000009826]
ens|glutamyl aminopeptidase (aminopeptidase A) [Source:HGNC Symbol;Acc:3355] [ENSECAT00000009826]
ens|glutamyl aminopeptidase (aminopeptidase A) [Source:HGNC Symbol;Acc:3355] [ENSECAT00000009826]
ens|alanine-glyoxylate aminotransferase 2-like 1 [Source:HGNC Symbol;Acc:14404] [ENSECAT00000020135]
ens|matrix-remodelling associated 5 [Source:HGNC Symbol;Acc:7539] [ENSECAT00000018467]
ens|WWC family member 3 [Source:HGNC Symbol;Acc:29237] [ENSECAT00000013817]
ens|WWC family member 3 [Source:HGNC Symbol;Acc:29237] [ENSECAT00000013817]
ens|WWC family member 3 [Source:HGNC Symbol;Acc:29237] [ENSECAT00000013817]
ens|WWC family member 3 [Source:HGNC Symbol;Acc:29237] [ENSECAT00000013817]
ens|WWC family member 3 [Source:HGNC Symbol;Acc:29237] [ENSECAT00000013817]
ens|angiotensin I converting enzyme (peptidyl-dipeptidase A) 2 [Source:HGNC Symbol;Acc:13557] [ENSECAT00000000000]
ens|angiotensin I converting enzyme (peptidyl-dipeptidase A) 2 [Source:HGNC Symbol;Acc:13557] [ENSECAT00000000000]
ens|carbonic anhydrase VB, mitochondrial [Source:HGNC Symbol;Acc:1378] [ENSECAT00000000515]
ens|carbonic anhydrase VB, mitochondrial [Source:HGNC Symbol;Acc:1378] [ENSECAT00000000515]
ens|SH3-domain kinase binding protein 1 [Source:HGNC Symbol;Acc:13867] [ENSECAT00000019477]
ens|SH3-domain kinase binding protein 1 [Source:HGNC Symbol;Acc:13867] [ENSECAT00000019477]
ens|spermine synthase [Source:HGNC Symbol;Acc:11123] [ENSECAT00000018780]
ens|glycerol kinase [Source:HGNC Symbol;Acc:4289] [ENSECAT00000006644]
ens|sushi-repeat containing protein, X-linked [Source:HGNC Symbol;Acc:11309] [ENSECAT00000020380]
ref|Equus caballus regucalcin (senescence marker protein-30) (RGN), mRNA [NM_001242448]
ens|Cbp/p300-interacting transactivator, with Glu/Asp-rich carboxy-terminal domain, 1 [Source:HGNC Symbol;Acc:11309] [ENSECAT00000020380]
ens|integral membrane protein 2A [Source:HGNC Symbol;Acc:6173] [ENSECAT00000011852]
ens|integral membrane protein 2A [Source:HGNC Symbol;Acc:6173] [ENSECAT00000011852]
ens|Uncharacterized protein [Source:UniProtKB/TrEMBL;Acc:F6W954] [ENSECAT00000002701]
ens|Bruton agammaglobulinemia tyrosine kinase [Source:HGNC Symbol;Acc:1133] [ENSECAT00000022788]
ens|galactosidase, alpha [Source:HGNC Symbol;Acc:4296] [ENSECAT00000019883]
ens|galactosidase, alpha [Source:HGNC Symbol;Acc:4296] [ENSECAT00000019883]
ens|Uncharacterized protein [Source:UniProtKB/TrEMBL;Acc:F6W6B4] [ENSECAT00000001958]
ens|Uncharacterized protein [Source:UniProtKB/TrEMBL;Acc:F6UAE4] [ENSECAT00000012412]
ens|collagen, type IV, alpha 5 [Source:HGNC Symbol;Acc:2207] [ENSECAT00000000945]
ens|lipoma HMGIC fusion partner-like 1 [Source:HGNC Symbol;Acc:6587] [ENSECAT00000016239]
ens|lipoma HMGIC fusion partner-like 1 [Source:HGNC Symbol;Acc:6587] [ENSECAT00000016239]
ens|plastin 3 [Source:HGNC Symbol;Acc:9091] [ENSECAT00000014110]
ens|Rho GTPase activating protein 36 [Source:HGNC Symbol;Acc:26388] [ENSECAT00000016721]
ens|renin binding protein [Source:HGNC Symbol;Acc:9959] [ENSECAT00000020280]
ens|Uncharacterized protein [Source:UniProtKB/TrEMBL;Acc:F6TQG4] [ENSECAT00000008904]
ens|Uncharacterized protein [Source:UniProtKB/TrEMBL;Acc:F6RAL8] [ENSECAT00000018908]
ens|Uncharacterized protein [Source:UniProtKB/TrEMBL;Acc:F7A3N5] [ENSECAT00000006360]
ens|HtrA serine peptidase 1 [Source:HGNC Symbol;Acc:9476] [ENSECAT00000010327]
ens|hyaluronan binding protein 2 [Source:HGNC Symbol;Acc:4798] [ENSECAT00000024517]
ens|oligonucleotide/oligosaccharide-binding fold containing 1 [Source:HGNC Symbol;Acc:26200] [ENSECAT00000000000]
ens|chromosome 10 open reading frame 32 [Source:HGNC Symbol;Acc:23516] [ENSECAT00000007274]
ens|carboxypeptidase N, polypeptide 1 [Source:HGNC Symbol;Acc:2312] [ENSECAT00000025993]
ens|carboxypeptidase N, polypeptide 1 [Source:HGNC Symbol;Acc:2312] [ENSECAT00000025993]
ens|ectonucleoside triphosphate diphosphohydrolase 1 [Source:HGNC Symbol;Acc:3363] [ENSECAT00000017307]
ens|helicase, lymphoid-specific [Source:HGNC Symbol;Acc:4861] [ENSECAT00000020327]

ens|helicase, lymphoid-specific [Source:HGNC Symbol;Acc:4861] [ENSECAT00000020327]
ens|cytochrome P450, family 26, subfamily A, polypeptide 1 [Source:HGNC Symbol;Acc:2603] [ENSECAT00000023
ens|kinesin family member 11 [Source:HGNC Symbol;Acc:6388] [ENSECAT00000007114]
ens|kinesin family member 20B [Source:HGNC Symbol;Acc:7212] [ENSECAT00000025130]
ens|kinesin family member 20B [Source:HGNC Symbol;Acc:7212] [ENSECAT00000025130]
ens|cholesterol 25-hydroxylase [Source:HGNC Symbol;Acc:1907] [ENSECAT00000004474]
ens|cholesterol 25-hydroxylase [Source:HGNC Symbol;Acc:1907] [ENSECAT00000004474]
ens|cholesterol 25-hydroxylase [Source:HGNC Symbol;Acc:1907] [ENSECAT00000004474]
ens|cholesterol 25-hydroxylase [Source:HGNC Symbol;Acc:1907] [ENSECAT00000004474]
ens|cholesterol 25-hydroxylase [Source:HGNC Symbol;Acc:1907] [ENSECAT00000004474]
ens|ZW10 interactor [Source:HGNC Symbol;Acc:13195] [ENSECAT00000000583]
ens|cyclin-dependent kinase 1 [Source:HGNC Symbol;Acc:1722] [ENSECAT00000010159]
ens|cyclin-dependent kinase 1 [Source:HGNC Symbol;Acc:1722] [ENSECAT00000010159]
ens|pyrophosphatase (inorganic) 1 [Source:HGNC Symbol;Acc:9226] [ENSECAT00000020025]
ens|pterin-4 alpha-carbinolamine dehydratase/dimerization cofactor of hepatocyte nuclear factor 1 alpha [Source
ens|pterin-4 alpha-carbinolamine dehydratase/dimerization cofactor of hepatocyte nuclear factor 1 alpha [Source
ens|pterin-4 alpha-carbinolamine dehydratase/dimerization cofactor of hepatocyte nuclear factor 1 alpha [Source
ens|pterin-4 alpha-carbinolamine dehydratase/dimerization cofactor of hepatocyte nuclear factor 1 alpha [Source
ens|pterin-4 alpha-carbinolamine dehydratase/dimerization cofactor of hepatocyte nuclear factor 1 alpha [Source
ens|DNA-damage-inducible transcript 4 [Source:HGNC Symbol;Acc:24944] [ENSECAT00000004086]
ens|DNA-damage-inducible transcript 4 [Source:HGNC Symbol;Acc:24944] [ENSECAT00000004086]
ens|N-deacetylase/N-sulfotransferase (heparan glucosaminyl) 2 [Source:HGNC Symbol;Acc:7681] [ENSECAT00000
ens|N-deacetylase/N-sulfotransferase (heparan glucosaminyl) 2 [Source:HGNC Symbol;Acc:7681] [ENSECAT00000
ens|N-deacetylase/N-sulfotransferase (heparan glucosaminyl) 2 [Source:HGNC Symbol;Acc:7681] [ENSECAT00000
ens|N-deacetylase/N-sulfotransferase (heparan glucosaminyl) 2 [Source:HGNC Symbol;Acc:7681] [ENSECAT00000
ens|N-deacetylase/N-sulfotransferase (heparan glucosaminyl) 2 [Source:HGNC Symbol;Acc:7681] [ENSECAT00000
ens|chromosome 10 open reading frame 11 [Source:HGNC Symbol;Acc:23405] [ENSECAT00000010910]
ens|chromosome 10 open reading frame 11 [Source:HGNC Symbol;Acc:23405] [ENSECAT00000010910]
ens|chromosome 10 open reading frame 11 [Source:HGNC Symbol;Acc:23405] [ENSECAT00000010910]
ens|placenta-specific 9 [Source:HGNC Symbol;Acc:19255] [ENSECAT00000011851]
ens|placenta-specific 9 [Source:HGNC Symbol;Acc:19255] [ENSECAT00000011851]
ens|placenta-specific 9 [Source:HGNC Symbol;Acc:19255] [ENSECAT00000011851]
ens|placenta-specific 9 [Source:HGNC Symbol;Acc:19255] [ENSECAT00000011851]
ens|placenta-specific 9 [Source:HGNC Symbol;Acc:19255] [ENSECAT00000011851]
ens|ATP-binding cassette, sub-family B (MDR/TAP), member 10 [Source:HGNC Symbol;Acc:41] [ENSECAT0000001.
ens|cholinergic receptor, muscarinic 3 [Source:HGNC Symbol;Acc:1952] [ENSECAT00000010538]
ens|oxoglutarate dehydrogenase-like [Source:HGNC Symbol;Acc:25590] [ENSECAT00000006659]
ens|Annexin [Source:UniProtKB/TrEMBL;Acc:F7E419] [ENSECAT00000021769]
ens|transmembrane 6 superfamily member 1 [Source:HGNC Symbol;Acc:11860] [ENSECAT00000004676]
ens|IQ motif containing GTPase activating protein 1 [Source:HGNC Symbol;Acc:6110] [ENSECAT00000026049]
ens|IQ motif containing GTPase activating protein 1 [Source:HGNC Symbol;Acc:6110] [ENSECAT00000026049]
ens|protein regulator of cytokinesis 1 [Source:HGNC Symbol;Acc:9341] [ENSECAT00000019233]
ens|peroxisomal biogenesis factor 11 alpha [Source:HGNC Symbol;Acc:8852] [ENSECAT00000010345]
ens|solute carrier organic anion transporter family, member 3A1 [Source:HGNC Symbol;Acc:10952] [ENSECAT000
ens|Uncharacterized protein [Source:UniProtKB/TrEMBL;Acc:F7C3A9] [ENSECAT00000007977]
ens|cyclin B2 [Source:HGNC Symbol;Acc:1580] [ENSECAT00000015911]
ens|lipase, hepatic [Source:HGNC Symbol;Acc:6619] [ENSECAT00000022385]

ens|lipase, hepatic [Source:HGNC Symbol;Acc:6619] [ENSECAT00000022385]
ens|lipase, hepatic [Source:HGNC Symbol;Acc:6619] [ENSECAT00000022385]
ens|family with sequence similarity 227, member B [Source:HGNC Symbol;Acc:26543] [ENSECAT00000014313]
ens|family with sequence similarity 227, member B [Source:HGNC Symbol;Acc:26543] [ENSECAT00000014313]
ens|fibrillin 1 [Source:HGNC Symbol;Acc:3603] [ENSECAT00000021326]
ens|Uncharacterized protein [Source:UniProtKB/TrEMBL;Acc:F6TCR6] [ENSECAT00000024707]
ens|budding uninhibited by benzimidazoles 1 homolog beta (yeast) [Source:HGNC Symbol;Acc:1149] [ENSECAT00000024707]
ens|lysophosphatidylcholine acyltransferase 4 [Source:HGNC Symbol;Acc:30059] [ENSECAT00000024661]
ens|solute carrier family 39 (zinc transporter), member 2 [Source:HGNC Symbol;Acc:17127] [ENSECAT000000229]
ens|NDRG family member 2 [Source:HGNC Symbol;Acc:14460] [ENSECAT00000025134]
ens|Uncharacterized protein [Source:UniProtKB/TrEMBL;Acc:F7DSA4] [ENSECAT00000000720]
ens|Uncharacterized protein [Source:UniProtKB/TrEMBL;Acc:F6X2M9] [ENSECAT00000018054]
ens|Uncharacterized protein [Source:UniProtKB/TrEMBL;Acc:F6X3N4] [ENSECAT00000023640]
ens|Uncharacterized protein [Source:UniProtKB/TrEMBL;Acc:F7BRY8] [ENSECAT00000024199]
ens|Uncharacterized protein [Source:UniProtKB/TrEMBL;Acc:F6VBH5] [ENSECAT00000024830]
ens|Uncharacterized protein [Source:UniProtKB/TrEMBL;Acc:F6UCF8] [ENSECAT00000008850]
ens|Uncharacterized protein [Source:UniProtKB/TrEMBL;Acc:F6XS64] [ENSECAT00000009819]
ens|Uncharacterized protein [Source:UniProtKB/TrEMBL;Acc:F7BZP9] [ENSECAT00000015873]
ens|Uncharacterized protein [Source:UniProtKB/TrEMBL;Acc:F6V0M8] [ENSECAT00000017008]
ens|egl nine homolog 3 (C. elegans) [Source:HGNC Symbol;Acc:14661] [ENSECAT00000005524]
ens|egl nine homolog 3 (C. elegans) [Source:HGNC Symbol;Acc:14661] [ENSECAT00000005524]
ens|nuclear factor of kappa light polypeptide gene enhancer in B-cells inhibitor, alpha [Source:HGNC Symbol;Acc:14661]
ens|nuclear factor of kappa light polypeptide gene enhancer in B-cells inhibitor, alpha [Source:HGNC Symbol;Acc:14661]
ens|nuclear factor of kappa light polypeptide gene enhancer in B-cells inhibitor, alpha [Source:HGNC Symbol;Acc:14661]
ens|nuclear factor of kappa light polypeptide gene enhancer in B-cells inhibitor, alpha [Source:HGNC Symbol;Acc:14661]
ens|nuclear factor of kappa light polypeptide gene enhancer in B-cells inhibitor, alpha [Source:HGNC Symbol;Acc:14661]
ens|solute carrier family 25 (mitochondrial oxoadipate carrier), member 21 [Source:HGNC Symbol;Acc:14411] [EN ref]
Equus caballus phosphorylase, glycogen, liver (PYGL), mRNA [NM_001145889]
gb|CT02035B2E11 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT02035B2E11, mRNA sequ
gb|CT02035B1H07 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT02035B1H07, mRNA sequ
gb|Equus caballus clone 02g08 BTG1-like protein (BTG1) mRNA, partial cds. [HQ889926]
gb|HL02021B2H08 Equine placenta cDNA Library Equus caballus cDNA clone HL02021B2H08, mRNA sequence [DN
gb|PREDICTED: Equus caballus similar to interleukin 32 (LOC100065894), mRNA [XM_001499705]
gb|MONO1_1_A06.b1_A005 Monocytes (MONO1) Equus caballus cDNA, mRNA sequence [BI960801]
gb|TSA: Equus caballus contig02841.EqcaPBMC mRNA sequence. [JL616464]
gb|CT02031B2H08 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT02031B2H08, mRNA sequ
gb|MONO1_5_B09.g1_A005 Monocytes (MONO1) Equus caballus cDNA, mRNA sequence [BI961409]
gb|MONO1_5_B09.g1_A005 Monocytes (MONO1) Equus caballus cDNA, mRNA sequence [BI961409]
gb|MONO1_5_B09.g1_A005 Monocytes (MONO1) Equus caballus cDNA, mRNA sequence [BI961409]
ens|Uncharacterized protein [Source:UniProtKB/TrEMBL;Acc:F6TC33] [ENSECAT00000024713]
ens|Uncharacterized protein [Source:UniProtKB/TrEMBL;Acc:F6TC33] [ENSECAT00000024713]
gb|LeukoS2_3_G12.b1_A024 Stimulated peripheral blood leukocytes S2 Equus caballus cDNA clone LeukoS2_3_G
gb|CT02036A1D10 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT02036A1D10, mRNA sequ
gb|CT02036A1D10 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT02036A1D10, mRNA sequ
gb|PREDICTED: Equus caballus similar to procollagen-lysine, 2-oxoglutarate 5-dioxygenase 2 (LOC100061030), mR
Unknown
Unknown

Unknown

Unknown

Unknown

gb|TSA: Equus caballus contig26782.EqcaPBMC mRNA sequence. [JL640617]

gb|TSA: Equus caballus contig26782.EqcaPBMC mRNA sequence. [JL640617]

gb|TSA: Equus caballus contig26782.EqcaPBMC mRNA sequence. [JL640617]

ens|GNAS complex locus [Source:HGNC Symbol;Acc:4392] [ENSECAT00000026245]

gb|MONO1_20_G12.g1_A005 Monocytes (MONO1) Equus caballus cDNA, mRNA sequence [BM735416]

gb|MONO1_16_D07.g1_A005 Monocytes (MONO1) Equus caballus cDNA, mRNA sequence [BM735147]

gb|MONO1_16_D07.g1_A005 Monocytes (MONO1) Equus caballus cDNA, mRNA sequence [BM735147]

gb|MONO1_16_D07.g1_A005 Monocytes (MONO1) Equus caballus cDNA, mRNA sequence [BM735147]

gb|MONO1_16_D07.g1_A005 Monocytes (MONO1) Equus caballus cDNA, mRNA sequence [BM735147]

gb|MONO1_20_C04.g1_A005 Monocytes (MONO1) Equus caballus cDNA, mRNA sequence [BM735385]

ref|PREDICTED: Equus caballus tropomyosin alpha-1 chain-like (LOC100147533), miscRNA [XR_044458]

ref|PREDICTED: Equus caballus tropomyosin alpha-1 chain-like (LOC100147533), miscRNA [XR_044458]

gb|TSA: Equus caballus contig23123.EqcaPBMC mRNA sequence. [JL637794]

gb|TSA: Equus caballus contig23123.EqcaPBMC mRNA sequence. [JL637794]

gb|TSA: Equus caballus contig23123.EqcaPBMC mRNA sequence. [JL637794]

gb|APL1_3_G11.g1_A008 Liver (APL1) Equus caballus cDNA, mRNA sequence [BM780455]

gb|APL1_3_G11.g1_A008 Liver (APL1) Equus caballus cDNA, mRNA sequence [BM780455]

gb|APL1_1_D05.g1_A008 Liver (APL1) Equus caballus cDNA, mRNA sequence [BM780317]

gb|APL1_3_H05.g1_A008 Liver (APL1) Equus caballus cDNA, mRNA sequence [BM780446]

gb|APL1_6_B02.g1_A008 Liver (APL1) Equus caballus cDNA, mRNA sequence [BM780693]

gb|PREDICTED: Equus caballus similar to Fibrinogen alpha chain precursor (LOC100069763), mRNA [XM_00191511]

gb|APL1_4_F03.g1_A008 Liver (APL1) Equus caballus cDNA, mRNA sequence [BM780561]

gb|APL1_4_F03.g1_A008 Liver (APL1) Equus caballus cDNA, mRNA sequence [BM780561]

gb|APL1_4_F03.g1_A008 Liver (APL1) Equus caballus cDNA, mRNA sequence [BM780561]

gb|APL1_4_F03.g1_A008 Liver (APL1) Equus caballus cDNA, mRNA sequence [BM780561]

gb|APL1_4_F03.g1_A008 Liver (APL1) Equus caballus cDNA, mRNA sequence [BM780561]

gb|HL02015B2D05 Equine placenta cDNA Library Equus caballus cDNA clone HL02015B2D05, mRNA sequence [DN

gb|HL02015B2D05 Equine placenta cDNA Library Equus caballus cDNA clone HL02015B2D05, mRNA sequence [DN

gb|HL02015B2D05 Equine placenta cDNA Library Equus caballus cDNA clone HL02015B2D05, mRNA sequence [DN

gb|HL02015B2D05 Equine placenta cDNA Library Equus caballus cDNA clone HL02015B2D05, mRNA sequence [DN

gb|LeukoS3_7_D09.g1_A025 Stimulated peripheral blood leukocytes S3 Equus caballus cDNA clone LeukoS3_7_D09

gb|LeukoS3_7_D09.g1_A025 Stimulated peripheral blood leukocytes S3 Equus caballus cDNA clone LeukoS3_7_D09

gb|LeukoS3_7_D09.g1_A025 Stimulated peripheral blood leukocytes S3 Equus caballus cDNA clone LeukoS3_7_D09

gb|LeukoS3_7_D09.g1_A025 Stimulated peripheral blood leukocytes S3 Equus caballus cDNA clone LeukoS3_7_D09

gb|LeukoS3_7_D09.g1_A025 Stimulated peripheral blood leukocytes S3 Equus caballus cDNA clone LeukoS3_7_D09

Unknown

gb|CT02037B1D03 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT02037B1D03, mRNA seq

gb|CT02037B1D03 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT02037B1D03, mRNA seq

gb|TSA: Equus caballus contig01060.EqcaPBMC mRNA sequence. [JL617428]

gb|TSA: Equus caballus contig01060.EqcaPBMC mRNA sequence. [JL617428]

gb|LeukoN4_4_C03.b1_A026 Unstimulated peripheral blood leukocytes N4 Equus caballus cDNA clone LeukoN4_4_C03

gb|LeukoN4_1_C11.b1_A026 Unstimulated peripheral blood leukocytes N4 Equus caballus cDNA clone LeukoN4_1_C11

ref|PREDICTED: Equus caballus b-cell lymphoma 3 protein-like (LOC100146304), miscRNA [XR_044611]

ref|PREDICTED: Equus caballus b-cell lymphoma 3 protein-like (LOC100146304), miscRNA [XR_044611]

ref|PREDICTED: Equus caballus b-cell lymphoma 3 protein-like (LOC100146304), miscRNA [XR_044611]
ref|PREDICTED: Equus caballus b-cell lymphoma 3 protein-like (LOC100146304), miscRNA [XR_044611]
gb|PREDICTED: Equus caballus pim-1 oncogene (PIM1), mRNA [XM_001500225]
gb|LeukoN1_2_H10.g1_A023 Unstimulated peripheral blood leukocytes N1 Equus caballus cDNA clone LeukoN1_
gb|LeukoN1_2_H10.g1_A023 Unstimulated peripheral blood leukocytes N1 Equus caballus cDNA clone LeukoN1_
gb|LeukoN1_2_H10.g1_A023 Unstimulated peripheral blood leukocytes N1 Equus caballus cDNA clone LeukoN1_
gb|LeukoN1_2_H10.g1_A023 Unstimulated peripheral blood leukocytes N1 Equus caballus cDNA clone LeukoN1_
gb|LeukoN1_2_H10.g1_A023 Unstimulated peripheral blood leukocytes N1 Equus caballus cDNA clone LeukoN1_
gb|LeukoN1_6_H10.b1_A023 Unstimulated peripheral blood leukocytes N1 Equus caballus cDNA clone LeukoN1_
gb|PREDICTED: Equus caballus similar to coactosin-like 1 (LOC100070195), mRNA [XM_001499862]
gb|PREDICTED: Equus caballus similar to coactosin-like 1 (LOC100070195), mRNA [XM_001499862]
gb|PREDICTED: Equus caballus similar to coactosin-like 1 (LOC100070195), mRNA [XM_001499862]
gb|PREDICTED: Equus caballus similar to coactosin-like 1 (LOC100070195), mRNA [XM_001499862]
gb|PREDICTED: Equus caballus similar to coactosin-like 1 (LOC100070195), mRNA [XM_001499862]
gb|TSA: Equus caballus contig06244.EqcaPBMC mRNA sequence. [JL621923]
Unknown
gb|TSA: Equus caballus contig04248.EqcaPBMC mRNA sequence. [JL620171]
gb|TSA: Equus caballus contig07441.EqcaPBMC mRNA sequence. [JL623025]
gb|CT02029A1A05 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT02029A1A05, mRNA sequ
gb|CT02029A1A05 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT02029A1A05, mRNA sequ
gb|LeukoN2_4_H12.b1_A024 Unstimulated peripheral blood leukocytes N2 Equus caballus cDNA clone LeukoN2_
gb|LeukoN2_4_H12.b1_A024 Unstimulated peripheral blood leukocytes N2 Equus caballus cDNA clone LeukoN2_
gb|LeukoN2_4_H12.b1_A024 Unstimulated peripheral blood leukocytes N2 Equus caballus cDNA clone LeukoN2_
gb|LeukoN2_4_H12.b1_A024 Unstimulated peripheral blood leukocytes N2 Equus caballus cDNA clone LeukoN2_
gb|LeukoN2_4_H12.b1_A024 Unstimulated peripheral blood leukocytes N2 Equus caballus cDNA clone LeukoN2_
gb|LeukoN2_4_C04.b1_A024 Unstimulated peripheral blood leukocytes N2 Equus caballus cDNA clone LeukoN2_
gb|LeukoN2_4_C04.b1_A024 Unstimulated peripheral blood leukocytes N2 Equus caballus cDNA clone LeukoN2_
gb|LeukoN2_4_C04.b1_A024 Unstimulated peripheral blood leukocytes N2 Equus caballus cDNA clone LeukoN2_
gb|LeukoN2_4_C04.b1_A024 Unstimulated peripheral blood leukocytes N2 Equus caballus cDNA clone LeukoN2_
gb|LeukoN2_4_C04.b1_A024 Unstimulated peripheral blood leukocytes N2 Equus caballus cDNA clone LeukoN2_
gb|PREDICTED: Equus caballus similar to transmembrane protein 140 (LOC100065089), mRNA [XM_001500540]
gb|PREDICTED: Equus caballus similar to transmembrane protein 140 (LOC100065089), mRNA [XM_001500540]
gb|PREDICTED: Equus caballus similar to transmembrane protein 140 (LOC100065089), mRNA [XM_001500540]
gb|PREDICTED: Equus caballus similar to c-Fos (LOC100051632), mRNA [XM_001491972]
gb|TSA: Equus caballus contig01892.EqcaPBMC mRNA sequence. [JL618128]
gb|TSA: Equus caballus contig01892.EqcaPBMC mRNA sequence. [JL618128]
gb|TSA: Equus caballus contig01892.EqcaPBMC mRNA sequence. [JL618128]
gb|LeukoS6_4_H06.b1_A028 Stimulated peripheral blood leukocytes S6 Equus caballus cDNA clone LeukoS6_4_H
gb|LeukoS6_4_H06.b1_A028 Stimulated peripheral blood leukocytes S6 Equus caballus cDNA clone LeukoS6_4_H
gb|LeukoS6_4_H06.b1_A028 Stimulated peripheral blood leukocytes S6 Equus caballus cDNA clone LeukoS6_4_H
gb|LeukoS6_4_H06.b1_A028 Stimulated peripheral blood leukocytes S6 Equus caballus cDNA clone LeukoS6_4_H
gb|LeukoS6_4_H06.b1_A028 Stimulated peripheral blood leukocytes S6 Equus caballus cDNA clone LeukoS6_4_H
gb|LeukoS3_8_B09.b1_A025 Stimulated peripheral blood leukocytes S3 Equus caballus cDNA clone LeukoS3_8_B
gb|LeukoS3_8_B09.b1_A025 Stimulated peripheral blood leukocytes S3 Equus caballus cDNA clone LeukoS3_8_B
gb|TSA: Equus caballus contig02968.EqcaPBMC mRNA sequence. [JL619056]
gb|LeukoS4_1_H09.b1_A026 Stimulated peripheral blood leukocytes S4 Equus caballus cDNA clone LeukoS4_1_H
gb|LeukoS4_1_H09.b1_A026 Stimulated peripheral blood leukocytes S4 Equus caballus cDNA clone LeukoS4_1_H

gb|LeukoS4_1_H09.b1_A026 Stimulated peripheral blood leukocytes S4 Equus caballus cDNA clone LeukoS4_1_H
gb|HL02018A2D03 Equine placenta cDNA Library Equus caballus cDNA clone HL02018A2D03, mRNA sequence [D
gb|HL02018A2D03 Equine placenta cDNA Library Equus caballus cDNA clone HL02018A2D03, mRNA sequence [D
gb|HL02018A2D03 Equine placenta cDNA Library Equus caballus cDNA clone HL02018A2D03, mRNA sequence [D
gb|LeukoS4_6_G10.b1_A026 Stimulated peripheral blood leukocytes S4 Equus caballus cDNA clone LeukoS4_6_G
gb|LeukoS4_6_G10.b1_A026 Stimulated peripheral blood leukocytes S4 Equus caballus cDNA clone LeukoS4_6_G
gb|LeukoS4_6_G10.b1_A026 Stimulated peripheral blood leukocytes S4 Equus caballus cDNA clone LeukoS4_6_G
gb|LeukoS5_3_C01.b1_A027 Stimulated peripheral blood leukocytes S5 Equus caballus cDNA clone LeukoS5_3_CC
gb|LeukoS5_3_C01.b1_A027 Stimulated peripheral blood leukocytes S5 Equus caballus cDNA clone LeukoS5_3_CC
gb|LeukoS5_3_C01.b1_A027 Stimulated peripheral blood leukocytes S5 Equus caballus cDNA clone LeukoS5_3_CC
gb|LeukoS5_3_C01.b1_A027 Stimulated peripheral blood leukocytes S5 Equus caballus cDNA clone LeukoS5_3_CC
gb|LeukoS5_3_C01.b1_A027 Stimulated peripheral blood leukocytes S5 Equus caballus cDNA clone LeukoS5_3_CC
gb|PREDICTED: Equus caballus similar to glycerol kinase, transcript variant 1 (LOC100051016), mRNA [XM_001488
gb|LeukoN3_3_D12.b1_A025 Unstimulated peripheral blood leukocytes N3 Equus caballus cDNA clone LeukoN3_
gb|TSA: Equus caballus contig25092.EqcaP BMC mRNA sequence. [JL639271]
gb|PREDICTED: Equus caballus arrestin domain containing 3 (ARRDC3), mRNA [XM_001504616]
gb|LeukoN3_5_B09.b1_A025 Unstimulated peripheral blood leukocytes N3 Equus caballus cDNA clone LeukoN3_
gb|LeukoN3_5_B09.b1_A025 Unstimulated peripheral blood leukocytes N3 Equus caballus cDNA clone LeukoN3_
gb|LeukoN3_5_B09.b1_A025 Unstimulated peripheral blood leukocytes N3 Equus caballus cDNA clone LeukoN3_
gb|LeukoN3_5_B09.b1_A025 Unstimulated peripheral blood leukocytes N3 Equus caballus cDNA clone LeukoN3_
gb|LeukoN3_5_B09.b1_A025 Unstimulated peripheral blood leukocytes N3 Equus caballus cDNA clone LeukoN3_
gb|LeukoN3_5_B09.b1_A025 Unstimulated peripheral blood leukocytes N3 Equus caballus cDNA clone LeukoN3_
gb|LeukoN5_1_A02.b1_A027 Unstimulated peripheral blood leukocytes N5 Equus caballus cDNA clone LeukoN5_
gb|TSA: Equus caballus contig14142.EqcaP BMC mRNA sequence. [JL629330]
gb|TSA: Equus caballus contig28178.EqcaP BMC mRNA sequence. [JL641694]
gb|TSA: Equus caballus contig28137.EqcaP BMC mRNA sequence. [JL616107]
gb|CT02032A1F04 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT02032A1F04, mRNA sequ
gb|CT02032A1F04 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT02032A1F04, mRNA sequ
gb|PREDICTED: Equus caballus similar to casein kinase I epsilon; CKI epsilon (LOC100055155), mRNA [XM_001501.
gb|PREDICTED: Equus caballus similar to casein kinase I epsilon; CKI epsilon (LOC100055155), mRNA [XM_001501.
gb|CT020011B21A01 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT020011B21A01, mRNA
gb|PREDICTED: Equus caballus similar to carboxypeptidase E (LOC100061513), mRNA [XM_001915786]
gb|PREDICTED: Equus caballus similar to carboxypeptidase E (LOC100061513), mRNA [XM_001915786]
gb|PREDICTED: Equus caballus similar to carboxypeptidase E (LOC100061513), mRNA [XM_001915786]
gb|CT02037A1G06 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT02037A1G06, mRNA seq
gb|CT02033A1D03 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT02033A1D03, mRNA seq
gb|CT02033A1D03 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT02033A1D03, mRNA seq
gb|CT02033A1A05 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT02033A1A05, mRNA seq
gb|CT02036B1E01 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT02036B1E01, mRNA sequ
gb|CT02036B1E01 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT02036B1E01, mRNA sequ
gb|PREDICTED: Equus caballus dachsous 1 (Drosophila) (DCHS1), mRNA [XM_001918087]
gb|CT020013A10A04 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT020013A10A04, mRNA
gb|CT020013A10A04 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT020013A10A04, mRNA
gb|CT020013A10A04 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT020013A10A04, mRNA
gb|CT02041A1D02 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT02041A1D02, mRNA seq
gb|CT02038B2G03 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT02038B2G03, mRNA seq
gb|CT02033A1E05 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT02033A1E05, mRNA sequ
gb|CT02042A2A05 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT02042A2A05, mRNA sequ

gb|CT020025A10B08 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT020025A10B08, mRNA
gb|CT020009A10E04 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT020009A10E04, mRNA
gb|TSA: Equus caballus contig02443.EqcaPBMC mRNA sequence. [JL618607]
gb|PREDICTED: Equus caballus similar to TRIM17 protein (LOC100060943), mRNA [XM_001495042]
gb|PREDICTED: Equus caballus similar to TRIM17 protein (LOC100060943), mRNA [XM_001495042]
gb|PREDICTED: Equus caballus similar to TRIM17 protein (LOC100060943), mRNA [XM_001495042]
gb|CT02031A1A04 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT02031A1A04, mRNA seq
gb|CT02031A1E01 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT02031A1E01, mRNA seq
gb|CT02031A1E01 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT02031A1E01, mRNA seq
gb|CT02031A1E01 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT02031A1E01, mRNA seq
gb|CT02031A1E01 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT02031A1E01, mRNA seq
gb|CT02031A1E01 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT02031A1E01, mRNA seq
gb|CT020021B10E08 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT020021B10E08, mRNA
gb|CT020021B10E08 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT020021B10E08, mRNA
gb|CT020021B10E08 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT020021B10E08, mRNA
gb|CT020021B10E08 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT020021B10E08, mRNA
gb|CT020021B10E08 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT020021B10E08, mRNA
gb|CT02038B1B09 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT02038B1B09, mRNA seq
gb|CT02038B1B09 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT02038B1B09, mRNA seq
gb|CT020003B20F08 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT020003B20F08, mRNA
gb|CT020003B20F08 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT020003B20F08, mRNA
gb|CT02033A1H10 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT02033A1H10, mRNA seq
gb|CT02034A1H08 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT02034A1H08, mRNA seq
gb|CT02041A2E03 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT02041A2E03, mRNA seq
gb|CT02041A2E03 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT02041A2E03, mRNA seq
gb|CT02031A1F02 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT02031A1F02, mRNA seq
gb|TSA: Equus caballus contig26272.EqcaPBMC mRNA sequence. [JL640190]
gb|TSA: Equus caballus contig26272.EqcaPBMC mRNA sequence. [JL640190]
gb|CT02031A2G09 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT02031A2G09, mRNA seq
gb|CT02031A2G09 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT02031A2G09, mRNA seq
gb|CT02031A2G09 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT02031A2G09, mRNA seq
ref|Equus caballus peripheral myelin protein 22 (PMP22), mRNA [NM_001081936]
gb|TSA: Equus caballus contig16590.EqcaPBMC mRNA sequence. [JL631676]
gb|TSA: Equus caballus contig12491.EqcaPBMC mRNA sequence. [JL627750]
gb|Equus caballus clone 04f10 krueppel-like factor 10-like protein (KLF10) mRNA, partial cds. [HQ890009]
gb|Equus caballus clone 04f10 krueppel-like factor 10-like protein (KLF10) mRNA, partial cds. [HQ890009]
gb|CT02033B1C06 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT02033B1C06, mRNA seq
gb|CT02033B1C06 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT02033B1C06, mRNA seq
ref|Equus caballus adrenomedullin (AMPP), mRNA [NM_001163879]
ref|Equus caballus adrenomedullin (AMPP), mRNA [NM_001163879]
ref|Equus caballus adrenomedullin (AMPP), mRNA [NM_001163879]
gb|HL02016B1B03 Equine placenta cDNA Library Equus caballus cDNA clone HL02016B1B03, mRNA sequence [DN
gb|HL02016B1B03 Equine placenta cDNA Library Equus caballus cDNA clone HL02016B1B03, mRNA sequence [DN
gb|TSA: Equus caballus contig04078.EqcaPBMC mRNA sequence. [JL620022]
gb|CT02032A1H12 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT02032A1H12, mRNA seq
gb|CT020022A10A01 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT020022A10A01, mRNA
gb|CT020022A10A01 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT020022A10A01, mRNA

gb|CT020007B20E11 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT020007B20E11, mRNA
ref|Equus caballus chromosome 2 open reading frame 40 (C15H2orf40), mRNA [NM_001242543]
ref|Equus caballus chromosome 2 open reading frame 40 (C15H2orf40), mRNA [NM_001242543]
ref|Equus caballus chromosome 2 open reading frame 40 (C15H2orf40), mRNA [NM_001242543]
ref|Equus caballus chromosome 2 open reading frame 40 (C15H2orf40), mRNA [NM_001242543]
ref|Equus caballus chromosome 2 open reading frame 40 (C15H2orf40), mRNA [NM_001242543]
gb|CT020018A20G10 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT020018A20G10, mRNA/
gb|CT02029B1D12 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT02029B1D12, mRNA seq
gb|CT02029B1D12 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT02029B1D12, mRNA seq
gb|PREDICTED: Equus caballus similar to DNA-damage-inducible transcript 4 protein (Protein regulated in develop
gb|PREDICTED: Equus caballus similar to DNA-damage-inducible transcript 4 protein (Protein regulated in develop
gb|PREDICTED: Equus caballus similar to DNA-damage-inducible transcript 4 protein (Protein regulated in develop
gb|PREDICTED: Equus caballus similar to DNA-damage-inducible transcript 4 protein (Protein regulated in develop
gb|PREDICTED: Equus caballus similar to DNA-damage-inducible transcript 4 protein (Protein regulated in develop
gb|HL02014A2G04 Equine placenta cDNA Library Equus caballus cDNA clone HL02014A2G04, mRNA sequence [DI
gb|CT020009A10A10 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT020009A10A10, mRNA/
gb|CT020009A10A10 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT020009A10A10, mRNA/
gb|CT020009A10A10 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT020009A10A10, mRNA/
gb|CT020009A10A10 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT020009A10A10, mRNA/
gb|CT020009A10A10 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT020009A10A10, mRNA/
gb|CT02036B1A04 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT02036B1A04, mRNA seq
gb|CT02036B1A04 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT02036B1A04, mRNA seq
gb|CT02036B1A04 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT02036B1A04, mRNA seq
gb|CT02036B1A04 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT02036B1A04, mRNA seq
gb|CT02036B1A04 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT02036B1A04, mRNA seq
gb|PREDICTED: Equus caballus similar to rCG51492 (LOC100146831), mRNA [XM_001916353]
gb|PREDICTED: Equus caballus leucine rich repeat containing 16A (LRRC16A), mRNA [XM_001915814]
gb|PREDICTED: Equus caballus leucine rich repeat containing 16A (LRRC16A), mRNA [XM_001915814]
gb|PREDICTED: Equus caballus leucine rich repeat containing 16A (LRRC16A), mRNA [XM_001915814]
gb|CT020010B10G04 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT020010B10G04, mRNA/
gb|CT020010B10G04 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT020010B10G04, mRNA/
gb|CT020010B10G04 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT020010B10G04, mRNA/
gb|CT020010B10G04 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT020010B10G04, mRNA/
gb|CT020010B10G04 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT020010B10G04, mRNA/
ens|melanoma antigen family D, 1 [Source:HGNC Symbol;Acc:6813] [ENSECAT00000028920]
ens|melanoma antigen family D, 1 [Source:HGNC Symbol;Acc:6813] [ENSECAT00000028920]
gb|CT02035B1C04 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT02035B1C04, mRNA seq
gb|CT02035B1C04 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT02035B1C04, mRNA seq
gb|CT02035B1C04 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT02035B1C04, mRNA seq
gb|CT02035B1C04 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT02035B1C04, mRNA seq
gb|CT02035B1C04 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT02035B1C04, mRNA seq
gb|CT020011A20D04 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT020011A20D04, mRNA/
gb|CT020011A20D04 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT020011A20D04, mRNA/
gb|CT020011A20D04 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT020011A20D04, mRNA/
gb|CT020011A20D04 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT020011A20D04, mRNA/
gb|CT020011A20D04 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT020011A20D04, mRNA/
gb|PREDICTED: Equus caballus fibroblast growth factor receptor 1 (fms-related tyrosine kinase 2, Pfeiffer syndron
gb|CT02033B1B12 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT02033B1B12, mRNA seq

gb|CT020011B21H07 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT020011B21H07, mRNA

gb|CT020012A10D01 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT020012A10D01, mRNA

gb|HL010001000_PLATE_H02_16_016 Equine lymphocyte cDNA Library Equus caballus cDNA clone HL010001000

gb|HL010001000_PLATE_H02_16_016 Equine lymphocyte cDNA Library Equus caballus cDNA clone HL010001000

gb|PREDICTED: Equus caballus similar to MPN domain-containing protein (LOC100146444), mRNA [XM_00191668

gb|TSA: Equus caballus contig14186.EqcaPBMC mRNA sequence. [JL629372]

gb|TSA: Equus caballus contig14186.EqcaPBMC mRNA sequence. [JL629372]

gb|TSA: Equus caballus contig14186.EqcaPBMC mRNA sequence. [JL629372]

gb|TSA: Equus caballus contig14186.EqcaPBMC mRNA sequence. [JL629372]

gb|CT02037A1E10 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT02037A1E10, mRNA sequ

gb|CT020013A20A11 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT020013A20A11, mRNA

gb|CT020013A20A11 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT020013A20A11, mRNA

gb|CT020013A20A11 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT020013A20A11, mRNA

gb|CT020013A20A11 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT020013A20A11, mRNA

gb|CT020013A20A11 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT020013A20A11, mRNA

gb|TSA: Equus caballus contig04984.EqcaPBMC mRNA sequence. [JL620804]

gb|TSA: Equus caballus contig04984.EqcaPBMC mRNA sequence. [JL620804]

gb|CT020013B10A04 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT020013B10A04, mRNA

gb|CT020013B10A04 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT020013B10A04, mRNA

Unknown

gb|CT02033A1F10 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT02033A1F10, mRNA sequ

gb|CT020017B10G09 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT020017B10G09, mRNA

gb|CT020017B10G09 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT020017B10G09, mRNA

gb|CT02037B1F05 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT02037B1F05, mRNA sequ

ref|PREDICTED: Equus caballus hypothetical protein LOC100630457 (LOC100630457), mRNA [XM_003364026]

gb|CT02040B1F06 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT02040B1F06, mRNA sequ

gb|CT02040B1F06 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT02040B1F06, mRNA sequ

gb|CT02029B1G11 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT02029B1G11, mRNA sequ

gb|CT02029B1G11 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT02029B1G11, mRNA sequ

gb|CT02040B1D04 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT02040B1D04, mRNA sequ

gb|CT020019B20A06 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT020019B20A06, mRNA

gb|CT020019B20A06 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT020019B20A06, mRNA

gb|CT020019B20A06 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT020019B20A06, mRNA

gb|CT020019B20A06 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT020019B20A06, mRNA

gb|CT020019B20A06 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT020019B20A06, mRNA

gb|CT020019B20A06 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT020019B20A06, mRNA

ref|PREDICTED: Equus caballus rho guanine nucleotide exchange factor 40-like (LOC100072713), mRNA [XM_0019

ref|PREDICTED: Equus caballus rho guanine nucleotide exchange factor 40-like (LOC100072713), mRNA [XM_0019

Unknown

Unknown

ref|PREDICTED: Equus caballus rho guanine nucleotide exchange factor 40-like (LOC100072713), mRNA [XM_0019

gb|TSA: Equus caballus contig23102.EqcaPBMC mRNA sequence. [JL637774]

gb|PREDICTED: Equus caballus similar to immunoglobulin superfamily, member 4A, transcript variant 1 (LOC1000

gb|CT020028A10C06 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT020028A10C06, mRNA

gb|CT020028A10C06 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT020028A10C06, mRNA

gb|CT020028A10C06 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT020028A10C06, mRNA

gb|CT020028A10C06 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT020028A10C06, mRNA

gb|CT020022A10A06 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT020022A10A06, mRNA

gb|CT020022A10H11 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT020022A10H11, mRNA

gb|CT020022A10H11 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT020022A10H11, mRNA
ens|BAI1-associated protein 2 [Source:HGNC Symbol;Acc:947] [ENSECAT0000024005]

Unknown

Unknown

Unknown

Unknown

Unknown

gb|CT020022B10G10 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT020022B10G10, mRNA

gb|CT020023A10A05 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT020023A10A05, mRNA

gb|CT020023A10A05 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT020023A10A05, mRNA

gb|CT020023A10A05 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT020023A10A05, mRNA

gb|CT020023A10A05 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT020023A10A05, mRNA

gb|CT020023A10A05 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT020023A10A05, mRNA

gb|CT02036B1H07 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT02036B1H07, mRNA sequ

gb|CT020023A10H07 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT020023A10H07, mRNA

gb|CT020023A10H07 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT020023A10H07, mRNA

gb|CT020023A10H07 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT020023A10H07, mRNA

gb|CT020023A10H07 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT020023A10H07, mRNA

gb|CT020023A10H07 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT020023A10H07, mRNA

gb|CT020024A10D12 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT020024A10D12, mRNA

gb|CT020024A10D12 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT020024A10D12, mRNA

gb|CT020024A10D12 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT020024A10D12, mRNA

gb|CT020024A10D12 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT020024A10D12, mRNA

gb|CT020024A10D12 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT020024A10D12, mRNA

gb|CT020024A10H05 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT020024A10H05, mRNA

gb|CT020024A10H05 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT020024A10H05, mRNA

gb|CT020024A10H05 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT020024A10H05, mRNA

gb|CT020024A10H05 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT020024A10H05, mRNA

gb|CT020024A10H05 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT020024A10H05, mRNA

gb|CT02034A1C04 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT02034A1C04, mRNA sequ

gb|CT02037B2H08 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT02037B2H08, mRNA sequ

gb|CT02035B1H07 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT02035B1H07, mRNA sequ

gb|CT02035B1B12 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT02035B1B12, mRNA sequ

gb|CT020027B10C01 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT020027B10C01, mRNA

gb|CT020027B10C01 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT020027B10C01, mRNA

gb|CT020027B10C01 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT020027B10C01, mRNA

gb|CT020027B10C01 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT020027B10C01, mRNA

gb|CT020027B10C01 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT020027B10C01, mRNA

gb|CT020028A20E04 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT020028A20E04, mRNA

gb|TSA: Equus caballus contig12491.EqcaPBMC mRNA sequence. [JL627750]

gb|CT02029A1E02 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT02029A1E02, mRNA sequ

gb|CT02029B2B04 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT02029B2B04, mRNA sequ

gb|CT02029B2F04 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT02029B2F04, mRNA sequ

gb|CT02029B2F04 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT02029B2F04, mRNA sequ

gb|CT02029B2F04 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT02029B2F04, mRNA sequ

gb|CT02029B2F04 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT02029B2F04, mRNA sequ

gb|CT02029B2F04 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT02029B2F04, mRNA sequ

ens|collagen, type XI, alpha 1 [Source:HGNC Symbol;Acc:2186] [ENSECAT00000024831]
ens|vascular endothelial growth factor B [Source:HGNC Symbol;Acc:12681] [ENSECAT00000010870]
gb|CT02031B1D08 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT02031B1D08, mRNA seq
gb|CT02031B2D02 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT02031B2D02, mRNA seq
gb|CT02031B2D07 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT02031B2D07, mRNA seq
gb|CT02031B2D07 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT02031B2D07, mRNA seq
gb|CT02031B2D07 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT02031B2D07, mRNA seq
ref|PREDICTED: Equus caballus mucolipin 1 (MCOLN1), mRNA [XM_001916944]
gb|CT02032B1E06 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT02032B1E06, mRNA sequ
gb|CT02033B2E05 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT02033B2E05, mRNA sequ
gb|CT02034A1A10 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT02034A1A10, mRNA seq
gb|CT02034A1A10 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT02034A1A10, mRNA seq
gb|CT02034A1B05 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT02034A1B05, mRNA seq
gb|CT02034B2A08 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT02034B2A08, mRNA sequ
ref|PREDICTED: Equus caballus insulin-like growth factor 2 mRNA-binding protein 2-like, transcript variant 1 (LOC1
gb|CT02035B2E04 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT02035B2E04, mRNA sequ
gb|CT02035B2E04 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT02035B2E04, mRNA sequ
gb|CT02036A2A12 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT02036A2A12, mRNA seq
gb|CT02036A2A12 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT02036A2A12, mRNA seq
gb|CT02036A2A12 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT02036A2A12, mRNA seq
gb|CT02036A2A12 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT02036A2A12, mRNA seq
gb|CT02036A2A12 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT02036A2A12, mRNA seq
gb|CT02036A2A12 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT02036A2A12, mRNA seq
gb|CT02042B2F09 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT02042B2F09, mRNA sequ
gb|CT02036B1G04 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT02036B1G04, mRNA seq
gb|CT02037A2C01 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT02037A2C01, mRNA seq
gb|CT02037A2C01 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT02037A2C01, mRNA seq
gb|CT02037A2C06 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT02037A2C06, mRNA seq
gb|CT02037A2C06 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT02037A2C06, mRNA seq
gb|CT02037A2C06 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT02037A2C06, mRNA seq
gb|CT02037A2C06 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT02037A2C06, mRNA seq
gb|CT02037A2C06 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT02037A2C06, mRNA seq
gb|CT02037A2C06 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT02037A2C06, mRNA seq
gb|CT02038A2G06 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT02038A2G06, mRNA seq
gb|CT02038A2G06 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT02038A2G06, mRNA seq
gb|CT02038A2G06 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT02038A2G06, mRNA seq
gb|CT02038A2G06 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT02038A2G06, mRNA seq
gb|CT02038A2G06 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT02038A2G06, mRNA seq
gb|CT02038B1E10 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT02038B1E10, mRNA sequ
gb|CT02038B1E10 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT02038B1E10, mRNA sequ
gb|CT02038B1E10 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT02038B1E10, mRNA sequ
gb|CT02038B1E10 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT02038B1E10, mRNA sequ
gb|CT02038B1E10 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT02038B1E10, mRNA sequ
gb|CT02038B2H03 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT02038B2H03, mRNA seq
gb|CT02040B1E01 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT02040B1E01, mRNA sequ
gb|CT02041A1G07 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT02041A1G07, mRNA seq
gb|CT02041A1G07 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT02041A1G07, mRNA seq
gb|CT02041A2B01 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT02041A2B01, mRNA seq
Unknown

gb|CT02042A1B05 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT02042A1B05, mRNA sequ
gb|CT02042A1B05 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT02042A1B05, mRNA sequ
gb|CT02042A1B05 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT02042A1B05, mRNA sequ
gb|CT02042A1B05 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT02042A1B05, mRNA sequ
gb|CT02042A1B05 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT02042A1B05, mRNA sequ
gb|CT02042B2C07 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT02042B2C07, mRNA sequ
gb|CT02042B2C07 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT02042B2C07, mRNA sequ
gb|CT02042B2C07 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT02042B2C07, mRNA sequ
gb|CT02042B2E01 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT02042B2E01, mRNA sequ
gb|HL010001000_PLATE_D06_44_046 Equine lymphocyte cDNA Library Equus caballus cDNA clone HL010001000
gb|HL010001000_PLATE_D06_44_046 Equine lymphocyte cDNA Library Equus caballus cDNA clone HL010001000
gb|HL010001000_PLATE_D06_44_046 Equine lymphocyte cDNA Library Equus caballus cDNA clone HL010001000
gb|HL010001000_PLATE_D06_44_046 Equine lymphocyte cDNA Library Equus caballus cDNA clone HL010001000
gb|HL010001000_PLATE_D06_44_046 Equine lymphocyte cDNA Library Equus caballus cDNA clone HL010001000
ref|Equus caballus NME/NM23 nucleoside diphosphate kinase 1 (NME1), mRNA [NM_001204742]
gb|HL01013A1F03 Equine lymphocyte cDNA Library Equus caballus cDNA clone HL01013A1F03, mRNA sequence [
gb|HL01013A1F03 Equine lymphocyte cDNA Library Equus caballus cDNA clone HL01013A1F03, mRNA sequence [
gb|HL01013A1F03 Equine lymphocyte cDNA Library Equus caballus cDNA clone HL01013A1F03, mRNA sequence [
gb|HL01013A1F03 Equine lymphocyte cDNA Library Equus caballus cDNA clone HL01013A1F03, mRNA sequence [
gb|HL01013A1F03 Equine lymphocyte cDNA Library Equus caballus cDNA clone HL01013A1F03, mRNA sequence [
gb|HL01013A1F06 Equine lymphocyte cDNA Library Equus caballus cDNA clone HL01013A1F06, mRNA sequence [
gb|HL01013A1F06 Equine lymphocyte cDNA Library Equus caballus cDNA clone HL01013A1F06, mRNA sequence [
gb|HL01013B1A10 Equine lymphocyte cDNA Library Equus caballus cDNA clone HL01013B1A10, mRNA sequence
gb|HL01013B2A10 Equine lymphocyte cDNA Library Equus caballus cDNA clone HL01013B2A10, mRNA sequence
gb|HL01013B2A10 Equine lymphocyte cDNA Library Equus caballus cDNA clone HL01013B2A10, mRNA sequence
gb|HL01013B2A10 Equine lymphocyte cDNA Library Equus caballus cDNA clone HL01013B2A10, mRNA sequence
ens|non-SMC condensin II complex, subunit D3 [Source:HGNC Symbol;Acc:28952] [ENSECAT00000019679]
ens|non-SMC condensin II complex, subunit D3 [Source:HGNC Symbol;Acc:28952] [ENSECAT00000019679]
ens|non-SMC condensin II complex, subunit D3 [Source:HGNC Symbol;Acc:28952] [ENSECAT00000019679]
ens|non-SMC condensin II complex, subunit D3 [Source:HGNC Symbol;Acc:28952] [ENSECAT00000019679]
ens|non-SMC condensin II complex, subunit D3 [Source:HGNC Symbol;Acc:28952] [ENSECAT00000019679]
gb|HL02014B2A08 Equine placenta cDNA Library Equus caballus cDNA clone HL02014B2A08, mRNA sequence [DN
gb|TSA: Equus caballus contig06705.EqcaPBMC mRNA sequence. [JL622341]
Unknown
Unknown
Unknown
gb|PREDICTED: Equus caballus similar to Serine [XM_001915904]
gb|PREDICTED: Equus caballus similar to Serine [XM_001915904]
ens|citrate lyase beta like [Source:HGNC Symbol;Acc:18355] [ENSECAT00000016962]
ens|citrate lyase beta like [Source:HGNC Symbol;Acc:18355] [ENSECAT00000016962]
ens|citrate lyase beta like [Source:HGNC Symbol;Acc:18355] [ENSECAT00000016962]
gb|TSA: Equus caballus contig28028.EqcaPBMC mRNA sequence. [JL641587]
gb|TSA: Equus caballus contig28028.EqcaPBMC mRNA sequence. [JL641587]
gb|TSA: Equus caballus contig28028.EqcaPBMC mRNA sequence. [JL641587]
gb|TSA: Equus caballus contig28028.EqcaPBMC mRNA sequence. [JL641587]
ens|Uncharacterized protein [Source:UniProtKB/TrEMBL;Acc:F6RHP4] [ENSECAT00000011411]
gb|TSA: Equus caballus contig23682.EqcaPBMC mRNA sequence. [JL638219]

gb|TSA: Equus caballus contig08850.EqcaPBMC mRNA sequence. [JL624314]
gb|TSA: Equus caballus contig08850.EqcaPBMC mRNA sequence. [JL624314]
gb|TSA: Equus caballus contig26404.EqcaPBMC mRNA sequence. [JL640316]
gb|TSA: Equus caballus contig26404.EqcaPBMC mRNA sequence. [JL640316]
gb|TSA: Equus caballus contig26404.EqcaPBMC mRNA sequence. [JL640316]
gb|TSA: Equus caballus contig26404.EqcaPBMC mRNA sequence. [JL640316]
gb|TSA: Equus caballus contig26404.EqcaPBMC mRNA sequence. [JL640316]
ens|kinesin family member 15 [Source:HGNC Symbol;Acc:17273] [ENSECAT00000016447]
gb|TSA: Equus caballus contig08347.EqcaPBMC mRNA sequence. [JL623852]
gb|HL01020B2A05 Equine lymphocyte cDNA Library Equus caballus cDNA clone HL01020B2A05, mRNA sequence
gb|HL01020B2A05 Equine lymphocyte cDNA Library Equus caballus cDNA clone HL01020B2A05, mRNA sequence
gb|HL01020B2A05 Equine lymphocyte cDNA Library Equus caballus cDNA clone HL01020B2A05, mRNA sequence
gb|HL01020B2A05 Equine lymphocyte cDNA Library Equus caballus cDNA clone HL01020B2A05, mRNA sequence
gb|TSA: Equus caballus contig07293.EqcaPBMC mRNA sequence. [JL622886]
gb|HL020001000_PLATE_E04_29_023 Equine placenta cDNA Library Equus caballus cDNA clone HL020001000_PL
gb|HL020002000_PLATE_F08_62_063 Equine placenta cDNA Library Equus caballus cDNA clone HL020002000_PL
gb|HL020002000_PLATE_F08_62_063 Equine placenta cDNA Library Equus caballus cDNA clone HL020002000_PL
gb|HL020002000_PLATE_F08_62_063 Equine placenta cDNA Library Equus caballus cDNA clone HL020002000_PL
gb|HL020002000_PLATE_F08_62_063 Equine placenta cDNA Library Equus caballus cDNA clone HL020002000_PL
gb|HL020002000_PLATE_F08_62_063 Equine placenta cDNA Library Equus caballus cDNA clone HL020002000_PL
gb|HL020002000_PLATE_G01_7_004 Equine placenta cDNA Library Equus caballus cDNA clone HL020002000_PLA
gb|HL020002000_PLATE_G01_7_004 Equine placenta cDNA Library Equus caballus cDNA clone HL020002000_PLA
gb|HL020002000_PLATE_G01_7_004 Equine placenta cDNA Library Equus caballus cDNA clone HL020002000_PLA
gb|HL020002000_PLATE_G01_7_004 Equine placenta cDNA Library Equus caballus cDNA clone HL020002000_PLA
gb|HL020002000_PLATE_G01_7_004 Equine placenta cDNA Library Equus caballus cDNA clone HL020002000_PLA
gb|HL02016B2A02 Equine placenta cDNA Library Equus caballus cDNA clone HL02016B2A02, mRNA sequence [DN
gb|PREDICTED: Equus caballus similar to CG32644 CG32644-PB (LOC100065516), mRNA [XM_001496077]
gb|TSA: Equus caballus contig26385.EqcaPBMC mRNA sequence. [JL640299]
gb|TSA: Equus caballus contig26385.EqcaPBMC mRNA sequence. [JL640299]
gb|TSA: Equus caballus contig26385.EqcaPBMC mRNA sequence. [JL640299]
gb|TSA: Equus caballus contig26385.EqcaPBMC mRNA sequence. [JL640299]
gb|TSA: Equus caballus contig26385.EqcaPBMC mRNA sequence. [JL640299]
gb|HL020005000_A05_33_033 Equine placenta cDNA Library Equus caballus cDNA clone HL020005000_A05_33_(
gb|HL020005000_A05_33_033 Equine placenta cDNA Library Equus caballus cDNA clone HL020005000_A05_33_(
gb|HL020005000_A05_33_033 Equine placenta cDNA Library Equus caballus cDNA clone HL020005000_A05_33_(
gb|HL02021A2F04 Equine placenta cDNA Library Equus caballus cDNA clone HL02021A2F04, mRNA sequence [DN
gb|HL02016B1F08 Equine placenta cDNA Library Equus caballus cDNA clone HL02016B1F08, mRNA sequence [DN
gb|HL020008000_PLATE_G06_47_050 Equine placenta cDNA Library Equus caballus cDNA clone HL020008000_PL
gb|HL020008000_PLATE_G06_47_050 Equine placenta cDNA Library Equus caballus cDNA clone HL020008000_PL
gb|HL020008000_PLATE_G06_47_050 Equine placenta cDNA Library Equus caballus cDNA clone HL020008000_PL
gb|HL020008000_PLATE_G06_47_050 Equine placenta cDNA Library Equus caballus cDNA clone HL020008000_PL
gb|HL020008000_PLATE_G06_47_050 Equine placenta cDNA Library Equus caballus cDNA clone HL020008000_PL
gb|TSA: Equus caballus contig27371.EqcaPBMC mRNA sequence. [JL641068]
gb|HL02018A1H12 Equine placenta cDNA Library Equus caballus cDNA clone HL02018A1H12, mRNA sequence [DI
gb|HL02018A1H12 Equine placenta cDNA Library Equus caballus cDNA clone HL02018A1H12, mRNA sequence [DI
gb|HL02018A1H12 Equine placenta cDNA Library Equus caballus cDNA clone HL02018A1H12, mRNA sequence [DI
gb|HL02018A1H12 Equine placenta cDNA Library Equus caballus cDNA clone HL02018A1H12, mRNA sequence [DI

gb|HL02018A1H12 Equine placenta cDNA Library Equus caballus cDNA clone HL02018A1H12, mRNA sequence [DN
gb|PREDICTED: Equus caballus similar to granzyme B (LOC100050711), mRNA [XM_001915586]

gb|HL020010000_PLATE_C01_3_004 Equine placenta cDNA Library Equus caballus cDNA clone HL020010000_PLA
gb|HL020010000_PLATE_C01_3_004 Equine placenta cDNA Library Equus caballus cDNA clone HL020010000_PLA
gb|HL020010000_PLATE_C01_3_004 Equine placenta cDNA Library Equus caballus cDNA clone HL020010000_PLA
gb|HL020010000_PLATE_C01_3_004 Equine placenta cDNA Library Equus caballus cDNA clone HL020010000_PLA
gb|HL020010000_PLATE_C11_83_084 Equine placenta cDNA Library Equus caballus cDNA clone HL020010000_PL
Unknown

gb|HL02019B1D12 Equine placenta cDNA Library Equus caballus cDNA clone HL02019B1D12, mRNA sequence [DN
gb|HL020010000_PLATE_G06_47_050 Equine placenta cDNA Library Equus caballus cDNA clone HL020010000_PL
gb|HL020010000_PLATE_G06_47_050 Equine placenta cDNA Library Equus caballus cDNA clone HL020010000_PL
gb|HL020010000_PLATE_G06_47_050 Equine placenta cDNA Library Equus caballus cDNA clone HL020010000_PL
gb|HL020010000_PLATE_G06_47_050 Equine placenta cDNA Library Equus caballus cDNA clone HL020010000_PL
gb|HL020010000_PLATE_G06_47_050 Equine placenta cDNA Library Equus caballus cDNA clone HL020010000_PL
gb|HL020010000_PLATE_H08_64_074 Equine placenta cDNA Library Equus caballus cDNA clone HL020010000_PL
gb|HL020010000_PLATE_H10_80_090 Equine placenta cDNA Library Equus caballus cDNA clone HL020010000_PL
gb|HL020011000_PLATE_F08_62_073 Equine placenta cDNA Library Equus caballus cDNA clone HL020011000_PL
gb|HL02013A2D06 Equine placenta cDNA Library Equus caballus cDNA clone HL02013A2D06, mRNA sequence [DN
Unknown

gb|HL02013B1C02 Equine placenta cDNA Library Equus caballus cDNA clone HL02013B1C02, mRNA sequence [DN
gb|HL02013B1D09 Equine placenta cDNA Library Equus caballus cDNA clone HL02013B1D09, mRNA sequence [DN
gb|HL02013B1D09 Equine placenta cDNA Library Equus caballus cDNA clone HL02013B1D09, mRNA sequence [DN
gb|HL02013B1D09 Equine placenta cDNA Library Equus caballus cDNA clone HL02013B1D09, mRNA sequence [DN
gb|HL02013B1D09 Equine placenta cDNA Library Equus caballus cDNA clone HL02013B1D09, mRNA sequence [DN
gb|HL02013B1D09 Equine placenta cDNA Library Equus caballus cDNA clone HL02013B1D09, mRNA sequence [DN
gb|HL02014A2E03 Equine placenta cDNA Library Equus caballus cDNA clone HL02014A2E03, mRNA sequence [DN
gb|HL02014B1G10 Equine placenta cDNA Library Equus caballus cDNA clone HL02014B1G10, mRNA sequence [DN
gb|HL02015B1B09 Equine placenta cDNA Library Equus caballus cDNA clone HL02015B1B09, mRNA sequence [DN
gb|HL02015B1B09 Equine placenta cDNA Library Equus caballus cDNA clone HL02015B1B09, mRNA sequence [DN
gb|HL02015B1B09 Equine placenta cDNA Library Equus caballus cDNA clone HL02015B1B09, mRNA sequence [DN
gb|HL02015B1B09 Equine placenta cDNA Library Equus caballus cDNA clone HL02015B1B09, mRNA sequence [DN
gb|HL02015B1B09 Equine placenta cDNA Library Equus caballus cDNA clone HL02015B1B09, mRNA sequence [DN
Unknown
Unknown
Unknown
Unknown
Unknown

gb|HL02019A1H08 Equine placenta cDNA Library Equus caballus cDNA clone HL02019A1H08, mRNA sequence [DN
gb|HL02016A2A05 Equine placenta cDNA Library Equus caballus cDNA clone HL02016A2A05, mRNA sequence [DN
gb|HL02016A2A05 Equine placenta cDNA Library Equus caballus cDNA clone HL02016A2A05, mRNA sequence [DN
gb|HL02016A2A05 Equine placenta cDNA Library Equus caballus cDNA clone HL02016A2A05, mRNA sequence [DN
gb|HL02016A2A05 Equine placenta cDNA Library Equus caballus cDNA clone HL02016A2A05, mRNA sequence [DN
gb|HL02016A2D02 Equine placenta cDNA Library Equus caballus cDNA clone HL02016A2D02, mRNA sequence [DN
gb|HL02016A2D02 Equine placenta cDNA Library Equus caballus cDNA clone HL02016A2D02, mRNA sequence [DN
gb|HL02016B1B10 Equine placenta cDNA Library Equus caballus cDNA clone HL02016B1B10, mRNA sequence [DN
gb|HL02016B1B10 Equine placenta cDNA Library Equus caballus cDNA clone HL02016B1B10, mRNA sequence [DN
gb|HL02016B1B10 Equine placenta cDNA Library Equus caballus cDNA clone HL02016B1B10, mRNA sequence [DN

gb|HL02019B2B09 Equine placenta cDNA Library Equus caballus cDNA clone HL02019B2B09, mRNA sequence [DN
gb|HL02019B2G06 Equine placenta cDNA Library Equus caballus cDNA clone HL02019B2G06, mRNA sequence [DN
gb|HL02020A2G03 Equine placenta cDNA Library Equus caballus cDNA clone HL02020A2G03, mRNA sequence [DN
gb|HL02020A2G03 Equine placenta cDNA Library Equus caballus cDNA clone HL02020A2G03, mRNA sequence [DN
gb|HL02020A2G03 Equine placenta cDNA Library Equus caballus cDNA clone HL02020A2G03, mRNA sequence [DN
gb|HL02020A2G03 Equine placenta cDNA Library Equus caballus cDNA clone HL02020A2G03, mRNA sequence [DN
gb|HL02020A2G03 Equine placenta cDNA Library Equus caballus cDNA clone HL02020A2G03, mRNA sequence [DN
gb|HL02020B1D04 Equine placenta cDNA Library Equus caballus cDNA clone HL02020B1D04, mRNA sequence [DN
Unknown

gb|HL02020B2B12 Equine placenta cDNA Library Equus caballus cDNA clone HL02020B2B12, mRNA sequence [DN
gb|HL02021A2F08 Equine placenta cDNA Library Equus caballus cDNA clone HL02021A2F08, mRNA sequence [DN
gb|TSA: Equus caballus contig27473.EqcaPBMC mRNA sequence. [JL641147]
ens|nuclear receptor coactivator 7 [Source:HGNC Symbol;Acc:21081] [ENSECAT00000015085]
ens|nuclear receptor coactivator 7 [Source:HGNC Symbol;Acc:21081] [ENSECAT00000015085]
ens|nuclear receptor coactivator 7 [Source:HGNC Symbol;Acc:21081] [ENSECAT00000015085]
gb|HL02021B2F07 Equine placenta cDNA Library Equus caballus cDNA clone HL02021B2F07, mRNA sequence [DN
gb|HL02021B2F07 Equine placenta cDNA Library Equus caballus cDNA clone HL02021B2F07, mRNA sequence [DN
gb|HL02021B2F07 Equine placenta cDNA Library Equus caballus cDNA clone HL02021B2F07, mRNA sequence [DN
gb|HL02021B2F07 Equine placenta cDNA Library Equus caballus cDNA clone HL02021B2F07, mRNA sequence [DN
gb|HL02021B2F07 Equine placenta cDNA Library Equus caballus cDNA clone HL02021B2F07, mRNA sequence [DN
gb|HL02021B2F07 Equine placenta cDNA Library Equus caballus cDNA clone HL02021B2F07, mRNA sequence [DN
gb|HL02022B1A11 Equine placenta cDNA Library Equus caballus cDNA clone HL02022B1A11, mRNA sequence [DN
gb|HL02022B1A11 Equine placenta cDNA Library Equus caballus cDNA clone HL02022B1A11, mRNA sequence [DN
gb|HL02022B1A11 Equine placenta cDNA Library Equus caballus cDNA clone HL02022B1A11, mRNA sequence [DN
gb|HL02022B1A11 Equine placenta cDNA Library Equus caballus cDNA clone HL02022B1A11, mRNA sequence [DN
gb|HL02022B1A11 Equine placenta cDNA Library Equus caballus cDNA clone HL02022B1A11, mRNA sequence [DN
gb|HL02022B1A11 Equine placenta cDNA Library Equus caballus cDNA clone HL02022B1A11, mRNA sequence [DN
Unknown

ens|myosin, heavy chain 6, cardiac muscle, alpha [Source:HGNC Symbol;Acc:7576] [ENSECAT00000022901]
gb|PREDICTED: Equus caballus sodium [XM_001491201]
gb|PREDICTED: Equus caballus sodium [XM_001491201]
ref|Equus caballus microphthalmia-associated transcription factor (MITF), mRNA [NM_001163874]
ens|Uncharacterized protein [Source:UniProtKB/TrEMBL;Acc:F6XA91] [ENSECAT00000025949]
ens|Uncharacterized protein [Source:UniProtKB/TrEMBL;Acc:F7DXG2] [ENSECAT00000021134]
gb|LeukoN5_4_F08.b1_A027 Unstimulated peripheral blood leukocytes N5 Equus caballus cDNA clone LeukoN5_4
gb|CT020021A10A01 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT020021A10A01, mRNA
gb|LeukoS4_1_D01.b1_A026 Stimulated peripheral blood leukocytes S4 Equus caballus cDNA clone LeukoS4_1_D01
ref|PREDICTED: Equus caballus carcinoembryonic antigen-related cell adhesion molecule 5-like (LOC100069166), mRNA
gb|LeukoS4_5_A02.b1_A026 Stimulated peripheral blood leukocytes S4 Equus caballus cDNA clone LeukoS4_5_A02
gb|LeukoS4_5_A02.b1_A026 Stimulated peripheral blood leukocytes S4 Equus caballus cDNA clone LeukoS4_5_A02
ens|amyloid beta (A4) precursor protein-binding, family B, member 1 interacting protein [Source:HGNC Symbol;A
ens|amyloid beta (A4) precursor protein-binding, family B, member 1 interacting protein [Source:HGNC Symbol;A
ens|amyloid beta (A4) precursor protein-binding, family B, member 1 interacting protein [Source:HGNC Symbol;A
ens|S100 calcium binding protein A4 [Source:HGNC Symbol;Acc:10494] [ENSECAT00000008288]
gb|PREDICTED: Equus caballus plastin 3 (T isoform), transcript variant 1 (PLS3), mRNA [XM_001488260]
gb|TSA: Equus caballus contig26771.EqcaPBMC mRNA sequence. [JL640608]
Unknown
Unknown
gb|APL1_3_H09.g1_A008 Liver (APL1) Equus caballus cDNA, mRNA sequence [BM780438]

ens|plasminogen [Source:HGNC Symbol;Acc:9071] [ENSECAT00000008801]
ens|plasminogen [Source:HGNC Symbol;Acc:9071] [ENSECAT00000008801]
ens|nuclear factor of kappa light polypeptide gene enhancer in B-cells inhibitor, alpha [Source:HGNC Symbol;Acc:gb|Equus caballus isolate 137 MHC class I antigen mRNA, partial cds. [AY176125]
ens|Uncharacterized protein [Source:UniProtKB/TrEMBL;Acc:F7BN88] [ENSECAT00000020228]
gb|TSA: Equus caballus contig26679.EqcaPBMC mRNA sequence. [JL640533]
Unknown
gb|LeukoS2_3_C09.b1_A024 Stimulated peripheral blood leukocytes S2 Equus caballus cDNA clone LeukoS2_3_CC
gb|LeukoS2_3_C09.b1_A024 Stimulated peripheral blood leukocytes S2 Equus caballus cDNA clone LeukoS2_3_CC
gb|LeukoS2_3_C09.b1_A024 Stimulated peripheral blood leukocytes S2 Equus caballus cDNA clone LeukoS2_3_CC
gb|LeukoS2_3_C09.b1_A024 Stimulated peripheral blood leukocytes S2 Equus caballus cDNA clone LeukoS2_3_CC
gb|LeukoS2_3_C09.b1_A024 Stimulated peripheral blood leukocytes S2 Equus caballus cDNA clone LeukoS2_3_CC
Unknown
gb|CT020005A10G10 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT020005A10G10, mRNA
gb|PREDICTED: Equus caballus similar to collagen, type XI, alpha 1 (LOC100049922), mRNA [XM_001918115]
Unknown
ref|PREDICTED: Equus caballus protein FAM72A-like (LOC100629703), mRNA [XM_003364924]
ref|PREDICTED: Equus caballus hypothetical protein LOC100629324 (LOC100629324), mRNA [XM_003364068]
ens|Uncharacterized protein [Source:UniProtKB/TrEMBL;Acc:F6RAL8] [ENSECAT00000018908]
gb|TSA: Equus caballus contig00244.EqcaPBMC mRNA sequence. [JL616764]
gb|TSA: Equus caballus contig00244.EqcaPBMC mRNA sequence. [JL616764]
gb|TSA: Equus caballus contig00244.EqcaPBMC mRNA sequence. [JL616764]
gb|TSA: Equus caballus contig00244.EqcaPBMC mRNA sequence. [JL616764]
Unknown
gb|PREDICTED: Equus caballus melanoma antigen family D, 4, transcript variant 2 (MAGED4), mRNA [XM_001497]
gb|PREDICTED: Equus caballus melanoma antigen family D, 4, transcript variant 2 (MAGED4), mRNA [XM_001497]
gb|PREDICTED: Equus caballus melanoma antigen family D, 4, transcript variant 2 (MAGED4), mRNA [XM_001497]
gb|PREDICTED: Equus caballus melanoma antigen family D, 4, transcript variant 2 (MAGED4), mRNA [XM_001497]
gb|PREDICTED: Equus caballus melanoma antigen family D, 4, transcript variant 2 (MAGED4), mRNA [XM_001497]
ref|PREDICTED: Equus caballus profilin-2-like (LOC100630364), mRNA [XM_003363112]
ref|PREDICTED: Equus caballus acyl-coenzyme A thioesterase 2, mitochondrial-like (LOC100146551), mRNA [XM_
gb|CT02031B2H08 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT02031B2H08, mRNA seq
Unknown
Unknown
ref|PREDICTED: Equus caballus rho guanine nucleotide exchange factor 40-like (LOC100072713), mRNA [XM_0019
ref|PREDICTED: Equus caballus rho guanine nucleotide exchange factor 40-like (LOC100072713), mRNA [XM_0019
ref|PREDICTED: Equus caballus rho guanine nucleotide exchange factor 40-like (LOC100072713), mRNA [XM_0019
ref|PREDICTED: Equus caballus rho guanine nucleotide exchange factor 40-like (LOC100072713), mRNA [XM_0019
Unknown
gb|PREDICTED: Equus caballus similar to carboxypeptidase E (LOC100061513), mRNA [XM_001915786]
gb|PREDICTED: Equus caballus similar to carboxypeptidase E (LOC100061513), mRNA [XM_001915786]
gb|CT02039B2B02 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT02039B2B02, mRNA seq
gb|CT02039B2B02 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT02039B2B02, mRNA seq
gb|CT02039B2B02 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT02039B2B02, mRNA seq
gb|CT02039B2B02 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT02039B2B02, mRNA seq
gb|CT02039B2B02 Equine Articular Cartilage cDNA Library Equus caballus cDNA clone CT02039B2B02, mRNA seq
ref|PREDICTED: Equus caballus hypothetical protein LOC100630708 (LOC100630708), mRNA [XM_003363908]

Unknown

Unknown

gb|TSA: Equus caballus contig02521.EqcaPBMC mRNA sequence. [JL615995]

gb|TSA: Equus caballus contig02521.EqcaPBMC mRNA sequence. [JL615995]

ref|PREDICTED: Equus caballus hypothetical protein LOC100630533 (LOC100630533), mRNA [XM_003364675]

gb|PREDICTED: Equus caballus similar to granzyme B (LOC100050711), mRNA [XM_001915586]

gb|PREDICTED: Equus caballus similar to L-threonine dehydrogenase (LOC100147648), mRNA [XM_001915402]

Unknown

gb|TSA: Equus caballus contig05471.EqcaPBMC mRNA sequence. [JL621232]

Unknown

Unknown

Unknown

Unknown

ens|Uncharacterized protein [Source:UniProtKB/TrEMBL;Acc:F7BN88] [ENSECAT00000020228]

ref|PREDICTED: Equus caballus hypothetical protein LOC100630277 (LOC100630277), mRNA [XM_003362639]

ref|PREDICTED: Equus caballus retinol dehydrogenase 16-like (LOC100061740), mRNA [XM_001495379]

ens|centromere protein A [Source:HGNC Symbol;Acc:1851] [ENSECAT00000017091]

ref|PREDICTED: Equus caballus histone H1.3-like (LOC100053791), mRNA [XM_001497648]

ref|PREDICTED: Equus caballus HLA class II histocompatibility antigen, DQ alpha 2 chain-like (LOC100630674), mRNA

Unknown

Unknown

Unknown

Unknown

Unknown

ens|chemokine (C-C motif) ligand 26 [Source:HGNC Symbol;Acc:10625] [ENSECAT00000024168]

ens|chemokine (C-C motif) ligand 28 [Source:HGNC Symbol;Acc:17700] [ENSECAT00000008721]

ens|chemokine (C-C motif) ligand 28 [Source:HGNC Symbol;Acc:17700] [ENSECAT00000008721]

ens|chemokine (C-C motif) ligand 28 [Source:HGNC Symbol;Acc:17700] [ENSECAT00000008721]

Unknown

Unknown

Unknown

Unknown

Unknown

ens|collagen, type XIII, alpha 1 [Source:HGNC Symbol;Acc:2190] [ENSECAT00000019794]

ens|collagen, type XIII, alpha 1 [Source:HGNC Symbol;Acc:2190] [ENSECAT00000019794]

ens|collagen, type XIII, alpha 1 [Source:HGNC Symbol;Acc:2190] [ENSECAT00000019794]

ens|collagen, type XIII, alpha 1 [Source:HGNC Symbol;Acc:2190] [ENSECAT00000019794]

ens|collagen, type XIII, alpha 1 [Source:HGNC Symbol;Acc:2190] [ENSECAT00000019794]

Unknown

ref|Equus caballus SLIT and NTRK-like family, member 6 (SLITRK6), mRNA [NM_001257070]

ref|Equus caballus SLIT and NTRK-like family, member 6 (SLITRK6), mRNA [NM_001257070]

Unknown

ref|Equus caballus hemoglobin, beta (HBB), mRNA [NM_001164018]

ens|fatty acid binding protein 7, brain [Source:HGNC Symbol;Acc:3562] [ENSECAT00000024030]

ens|fatty acid binding protein 7, brain [Source:HGNC Symbol;Acc:3562] [ENSECAT00000024030]

ens|fatty acid binding protein 7, brain [Source:HGNC Symbol;Acc:3562] [ENSECAT00000024030]

ens|fatty acid binding protein 7, brain [Source:HGNC Symbol;Acc:3562] [ENSECAT00000024030]

ens|fatty acid binding protein 7, brain [Source:HGNC Symbol;Acc:3562] [ENSECAT00000024030]
gb|PREDICTED: Equus caballus similar to granzyme B (LOC100050711), mRNA [XM_001915586]
Unknown
ref|PREDICTED: Equus caballus leucine-rich repeat-containing protein C10orf11-like (LOC100072979), mRNA [XM_
ref|PREDICTED: Equus caballus leucine-rich repeat-containing protein C10orf11-like (LOC100072979), mRNA [XM_
Unknown
Unknown
Unknown
Unknown
Unknown
Unknown
Unknown
ens|guanine nucleotide binding protein (G protein), gamma 12 [Source:HGNC Symbol;Acc:19663] [ENSECAT00000
ens|guanine nucleotide binding protein (G protein), gamma 12 [Source:HGNC Symbol;Acc:19663] [ENSECAT00000
ens|guanine nucleotide binding protein (G protein), gamma 12 [Source:HGNC Symbol;Acc:19663] [ENSECAT00000
ens|guanine nucleotide binding protein (G protein), gamma 12 [Source:HGNC Symbol;Acc:19663] [ENSECAT00000
ens|guanine nucleotide binding protein (G protein), gamma 12 [Source:HGNC Symbol;Acc:19663] [ENSECAT00000
ref|PREDICTED: Equus caballus retinol dehydrogenase 16-like (LOC100061740), mRNA [XM_001495379]
Unknown
ens|Rho-related BTB domain containing 1 [Source:HGNC Symbol;Acc:18738] [ENSECAT00000012319]
ref|PREDICTED: Equus caballus SATB homeobox 2 (SATB2), mRNA [XM_001502744]
ref|PREDICTED: Equus caballus granzyme B(G,H)-like (LOC100053132), mRNA [XM_001488566]
ens|Uncharacterized protein [Source:UniProtKB/TrEMBL;Acc:F6R9G5] [ENSECAT00000028834]
ens|Uncharacterized protein [Source:UniProtKB/TrEMBL;Acc:F6PUB9] [ENSECAT00000028974]
ref|PREDICTED: Equus caballus hypothetical protein LOC100629581 (LOC100629581), mRNA [XM_003363981]
ref|PREDICTED: Equus caballus hypothetical protein LOC100629581 (LOC100629581), mRNA [XM_003363981]
ref|PREDICTED: Equus caballus histone H1.5-like (LOC100052727), mRNA [XM_001505032]
ref|PREDICTED: Equus caballus histone H2B type 1-like (LOC100630424), mRNA [XM_003363787]
Unknown
ens|thymidylate synthetase [Source:HGNC Symbol;Acc:12441] [ENSECAT00000024973]
ens|thymidylate synthetase [Source:HGNC Symbol;Acc:12441] [ENSECAT00000024973]
gb|TSA: Equus caballus contig05389.EqcaPBMC mRNA sequence. [JL616549]
ens|adenylate cyclase activating polypeptide 1 (pituitary) [Source:HGNC Symbol;Acc:241] [ENSECAT00000027150]
ens|adenylate cyclase activating polypeptide 1 (pituitary) [Source:HGNC Symbol;Acc:241] [ENSECAT00000027150]
ens|adenylate cyclase activating polypeptide 1 (pituitary) [Source:HGNC Symbol;Acc:241] [ENSECAT00000027150]
ens|adenylate cyclase activating polypeptide 1 (pituitary) [Source:HGNC Symbol;Acc:241] [ENSECAT00000027150]
ens|adenylate cyclase activating polypeptide 1 (pituitary) [Source:HGNC Symbol;Acc:241] [ENSECAT00000027150]
Unknown
ens|hematological and neurological expressed 1 [Source:HGNC Symbol;Acc:14569] [ENSECAT00000020042]
ens|hematological and neurological expressed 1 [Source:HGNC Symbol;Acc:14569] [ENSECAT00000020042]
ens|Uncharacterized protein [Source:UniProtKB/TrEMBL;Acc:F6Z674] [ENSECAT00000010046]
ens|Uncharacterized protein [Source:UniProtKB/TrEMBL;Acc:F6Z674] [ENSECAT00000010046]
ens|Uncharacterized protein [Source:UniProtKB/TrEMBL;Acc:F6Z674] [ENSECAT00000010046]
ens|Uncharacterized protein [Source:UniProtKB/TrEMBL;Acc:F6Z674] [ENSECAT00000010046]
ens|Uncharacterized protein [Source:UniProtKB/TrEMBL;Acc:F6Z674] [ENSECAT00000010046]
Unknown
Unknown

Unknown

Unknown

Unknown

ref| PREDICTED: Equus caballus citron (rho-interacting, serine/threonine kinase 21), transcript variant 1 (CIT), mRNA
Unknown

ens| periostin, osteoblast specific factor [Source:HGNC Symbol;Acc:16953] [ENSECAT00000025899]

ens| periostin, osteoblast specific factor [Source:HGNC Symbol;Acc:16953] [ENSECAT00000025899]

Unknown

ref| PREDICTED: Equus caballus cytochrome c oxidase subunit 8B, mitochondrial-like (LOC100629511), mRNA [XM_

ref| PREDICTED: Equus caballus granzyme B(G,H)-like (LOC100055651), mRNA [XM_001489737]

Unknown

ref| PREDICTED: Equus caballus uncharacterized protein C19orf57-like (LOC100063643), mRNA [XM_001494790]

ens| apolipoprotein A-II [Source:HGNC Symbol;Acc:601] [ENSECAT00000010408]

ens| apolipoprotein A-II [Source:HGNC Symbol;Acc:601] [ENSECAT00000010408]

ens| apolipoprotein A-II [Source:HGNC Symbol;Acc:601] [ENSECAT00000010408]

ens| apolipoprotein A-II [Source:HGNC Symbol;Acc:601] [ENSECAT00000010408]

ens| apolipoprotein A-II [Source:HGNC Symbol;Acc:601] [ENSECAT00000010408]

ens| Uncharacterized protein [Source:UniProtKB/TrEMBL;Acc:F6S544] [ENSECAT00000009098]

ref| Equus caballus granzyme B (granzyme 2, cytotoxic T-lymphocyte-associated serine esterase 1) (GZMB), mRNA

ens| allograft inflammatory factor 1-like [Source:HGNC Symbol;Acc:28904] [ENSECAT00000029007]

ens| vanin 1 [Source:HGNC Symbol;Acc:12705] [ENSECAT00000023756]

ens| vanin 1 [Source:HGNC Symbol;Acc:12705] [ENSECAT00000023756]

ens| vanin 1 [Source:HGNC Symbol;Acc:12705] [ENSECAT00000023756]

ens| vanin 1 [Source:HGNC Symbol;Acc:12705] [ENSECAT00000023756]

gb| TSA: Equus caballus contig05389.EqcaPBMC mRNA sequence. [JL616549]

ens| growth hormone receptor [Source:HGNC Symbol;Acc:4263] [ENSECAT00000003842]

ref| PREDICTED: Equus caballus glutathione S-transferase A1-like (LOC100064796), mRNA [XM_001498703]

Unknown

ens| C1q and tumor necrosis factor related protein 3 [Source:HGNC Symbol;Acc:14326] [ENSECAT00000023863]

Unknown

gb| TSA: Equus caballus contig22607.EqcaPBMC mRNA sequence. [JL637396]

gb| TSA: Equus caballus contig01011.EqcaPBMC mRNA sequence. [JL617387]

ref| Equus caballus selenoprotein P, plasma, 1 (SEPP1), mRNA [NM_001135605]

ref| Equus caballus selenoprotein P, plasma, 1 (SEPP1), mRNA [NM_001135605]

gb| PREDICTED: Equus caballus similar to Syndecan-2 precursor (SYND2) (Fibroglycan) (Heparan sulfate proteoglyc

ref| PREDICTED: Equus caballus claudin-3-like (LOC100059922), miscRNA [XR_131483]

gb| PREDICTED: Equus caballus similar to X-box binding protein 1 isoform XBP1(S) (LOC100059209), mRNA [XM_00

gb| TSA: Equus caballus contig23543.EqcaPBMC mRNA sequence. [JL638119]

gb| TSA: Equus caballus contig26645.EqcaPBMC mRNA sequence. [JL640507]

Unknown

gb| TSA: Equus caballus contig28055.EqcaPBMC mRNA sequence. [JL641608]

gb| HL02014B2B11 Equine placenta cDNA Library Equus caballus cDNA clone HL02014B2B11, mRNA sequence [DN

gb| HL02018B1D03 Equine placenta cDNA Library Equus caballus cDNA clone HL02018B1D03, mRNA sequence [DN

gb| HL02018B1D03 Equine placenta cDNA Library Equus caballus cDNA clone HL02018B1D03, mRNA sequence [DN

gb| HL02016B2F11 Equine placenta cDNA Library Equus caballus cDNA clone HL02016B2F11, mRNA sequence [DN

gb| HL02016B2F11 Equine placenta cDNA Library Equus caballus cDNA clone HL02016B2F11, mRNA sequence [DN

gb| PREDICTED: Equus caballus transcobalamin I (vitamin B12 binding protein, R binder family) (TCN1), mRNA [XM_

gb|PREDICTED: Equus caballus transcobalamin I (vitamin B12 binding protein, R binder family) (TCN1), mRNA [XM_001916168.1]
gb|PREDICTED: Equus caballus similar to GTPase, IMAP family member 7 (LOC100147001), mRNA [XM_001916168.1]

For Review Only

<i>CH_27vsCG_2</i>	<i>G_27_adj.</i>	<i>CH_27vsCH_30</i>	<i>CH_27vsCH_30</i>	<i>CH_27vsCH_3</i>	<i>CH_27vsCH_31</i>	<i>CH_34_L</i>
<i>7_LogFC</i>	<i>P.Val</i>	<i>30_LogFC</i>	<i>adj.P.Val</i>	<i>1_LogFC</i>	<i>adj.P.Val</i>	<i>ogFC</i>
-1.26058266	0.916814	-1.69857647	0.401895	-1.498174047	0.693824	-2.13304
-1.27700165	0.91431	-1.70507778	0.399854	-1.525847031	0.673118	-2.199
1.709569881	0.858865	2.307768587	0.363511	2.417486514	0.523478	1.445985
1.074641216	0.980829	-1.05921964	0.953736	1.294575973	0.857695	1.678379
-1.12568601	0.961884	-1.14740839	0.859411	-1.105526183	0.950552	1.415105
-1.09978193	0.966492	-1.11663137	0.883959	-1.100332103	0.949206	1.403212
-1.1293685	0.958381	-1.10867099	0.893697	-1.161304786	0.912996	1.441575
-1.14045248	0.956771	-1.14811854	0.85808	-1.127080174	0.938352	1.37873
-1.17523412	0.944416	-1.14261615	0.858858	-1.145017049	0.925252	1.345625
2.492373021	0.89776	3.489972038	0.560517	-1.290462007	0.962659	-4.04024
2.357495474	0.908402	3.443170074	0.566516	-1.327494711	0.957882	-4.23798
2.353935902	0.909612	3.299101306	0.585274	-1.443560071	0.943645	-4.37735
2.308797814	0.910694	3.251840817	0.589315	-1.413819062	0.946814	-4.51874
2.56420068	0.895589	3.421320193	0.572919	-1.403682315	0.948862	-3.92632
2.108262328	0.801636	1.439643213	0.532468	1.138882873	0.923716	1.222621
2.033271849	0.815692	1.478777709	0.487613	1.132850729	0.924671	1.225512
4.228934339	0.89776	12.90277877	0.438047	9.392192328	0.667119	34.18198
4.789554437	0.880152	12.15230714	0.431801	9.513529541	0.648507	33.25579
4.586642537	0.88671	11.66889704	0.440985	9.201832659	0.659142	32.63047
4.288855588	0.87732	8.792301276	0.449399	6.834538909	0.673118	22.76361
-1.21419879	0.921423	-1.59170041	0.397647	-2.210391477	0.29541	-2.0136
-1.26925105	0.90748	-1.66208436	0.376077	-2.222186136	0.320805	-2.10294
-1.3871271	0.823568	-1.48135893	0.357721	-1.08542214	0.936637	-1.1671
-1.44896172	0.847196	-2.09147494	0.216655	-2.099111895	0.370115	-1.87004
1.647467428	0.816167	1.421730396	0.543731	1.482227683	0.659308	1.578959
1.731651171	0.816167	1.399090321	0.552235	1.363341409	0.738654	1.730724
1.44451165	0.934984	-1.14122216	0.93513	-1.261925274	0.937259	2.06871
-1.04608822	0.982545	1.26803703	0.642311	1.109108537	0.927576	1.050977
-1.06995154	0.975466	1.29872935	0.660294	1.126188345	0.928149	1.018156
-1.04850775	0.982545	1.269866029	0.660076	1.092465518	0.943645	1.078834
-1.59035445	0.816686	-2.07903214	0.193771	-1.904474523	0.400879	-2.10528
1.595031976	0.862854	1.531266508	0.625829	-1.028085483	0.989283	-1.20137
1.592387723	0.858184	1.539766471	0.598435	1.039458719	0.9851	-1.27576
-1.36163955	0.945363	1.294722391	0.862328	1.677043645	0.823487	3.695675
-1.40681511	0.834818	-1.57253486	0.356845	-1.57031575	0.544054	-1.50829
2.101259853	0.904463	4.15689925	0.415923	2.931546432	0.70907	10.49349
2.101910386	0.903343	4.131513831	0.415923	2.949193229	0.706	10.36723
2.05937027	0.901232	4.062644491	0.403756	2.773964169	0.71273	8.943837
2.075516912	0.89832	3.985640649	0.408142	2.714656885	0.718293	8.583239
1.993557368	0.910648	4.202597673	0.406355	2.822601376	0.716897	9.704752
-1.27595565	0.860179	-1.25569486	0.602361	-1.301369863	0.701859	-1.32833
-1.35839107	0.829945	-1.2835676	0.579612	-1.25158986	0.769213	-1.46359
-1.73037173	0.816359	-1.89240378	0.312791	-1.569916216	0.642314	-1.30751

1.977820713	0.82491	2.217445485	0.379626	1.946107584	0.63441	1.183787
-1.79289647	0.851043	-1.97224314	0.467493	-1.853635031	0.676574	-1.97987
-2.15815269	0.821053	-2.36520308	0.379626	-2.285568698	0.584945	-2.41634
2.566363424	0.816167	-1.12293277	0.908451	1.6256669	0.701989	1.384163
2.251449747	0.816686	3.324531161	0.211545	6.35397085	0.078093	5.545888
1.782949861	0.837255	1.946397475	0.433059	1.216661008	0.92138	1.237977
1.609365901	0.85376	1.730346245	0.47803	1.0450332	0.981576	1.114754
1.627046254	0.851043	1.78843623	0.453875	1.209117125	0.914251	1.109063
1.665788986	0.844687	1.755370136	0.472874	1.226013519	0.907183	1.109925
1.638574139	0.855242	1.761257963	0.482097	1.234727041	0.906835	1.093212
1.831682009	0.816167	1.766529518	0.396116	1.862648238	0.539376	1.436334
-1.72291955	0.817981	-1.90623696	0.313082	-1.297408127	0.831354	-1.60318
-1.62766574	0.821053	-1.86025216	0.323397	-1.428296039	0.729833	-1.42869
-1.71164009	0.816167	-1.89498565	0.296325	-1.318942648	0.802122	-1.57874
-1.62278501	0.82042	-1.84830157	0.296199	-1.287920194	0.816744	-1.54915
-1.63627845	0.820453	-1.88140139	0.310166	-1.401535229	0.747263	-1.48807
-1.0658982	0.977715	-1.44614405	0.527191	-1.746374061	0.518185	-2.21478
-1.02682025	0.990076	-1.49128489	0.475437	-1.618593882	0.572008	-1.92736
-1.59424956	0.82042	-1.55573616	0.428243	-2.007033833	0.380281	-1.72376
3.429843085	0.816167	3.617733853	0.310912	2.716341264	0.607372	3.52576
-1.77990215	0.89776	-2.160063	0.570856	-1.451925546	0.89564	-2.06772
-1.66717502	0.910856	-1.95219234	0.623051	-1.30523944	0.931302	-1.92685
-2.65137433	0.784655	1.360923171	0.695588	1.420056357	0.787297	1.528171
-1.56140324	0.826598	-1.90869743	0.30048	-1.869003372	0.49308	-1.80721
2.374926996	0.82573	6.940276523	0.156357	1.412391193	0.890261	3.817588
-1.34607108	0.87732	-1.30036006	0.683188	-1.426339813	0.717935	-1.56293
-1.32326515	0.838076	-1.33923703	0.481865	-1.300235338	0.696619	-1.27068
-1.43423667	0.816686	-1.38654423	0.430974	-1.395717458	0.604905	-1.34661
-1.42112288	0.82042	-1.31456056	0.513605	-1.364930206	0.627969	-1.35295
-1.32866336	0.826598	-1.2913565	0.519659	-1.265649931	0.716396	-1.24635
-1.17753055	0.887409	-1.23574844	0.548016	-1.187055471	0.780236	-1.18977
5.381562475	0.87732	12.36370569	0.449399	10.10029193	0.658519	31.52045
2.318385317	0.829365	6.271005863	0.162719	1.316281217	0.92121	3.055516
-1.44582229	0.823568	-1.97221991	0.181846	-1.600534506	0.512127	-1.12087
-1.45255376	0.821053	-2.05678	0.166268	-1.674598384	0.463613	-1.13544
5.903713843	0.876519	15.02947821	0.434344	12.52091907	0.638575	40.57286
2.180884474	0.816167	-1.71970372	0.431969	1.179357149	0.916207	-1.19569
-1.07422025	0.981339	1.167893541	0.859177	-2.048644583	0.49946	-2.20028
-1.06553019	0.983074	1.146351442	0.876913	-2.223485649	0.435129	-2.19229
1.556819499	0.816167	1.146750491	0.788068	1.005185651	0.996283	-1.09816
3.56495629	0.780319	2.24226614	0.384966	2.462108841	0.518675	1.950498
-1.29119838	0.845691	-1.40016635	0.391412	-1.706283158	0.334842	-1.47345
-1.75978491	0.849849	-1.59065619	0.620278	-2.223192748	0.552784	-2.0289
-1.80930907	0.933857	-2.05602089	0.735863	-2.817553826	0.753691	1.280338
1.696693867	0.862854	2.320637618	0.369564	2.271040239	0.56719	1.596549
1.446786317	0.816167	1.565634925	0.277777	1.534896366	0.47245	1.365833
1.436532418	0.816167	1.505787097	0.300333	1.466066759	0.511109	1.232589

1.573802804	0.816167	1.597237682	0.321922	1.582643178	0.512127	1.334984
1.598477995	0.816167	1.618333529	0.327556	1.570814048	0.541786	1.340493
1.601548417	0.816167	1.648455682	0.282626	1.644854462	0.453583	1.397669
1.436292743	0.82042	1.476392763	0.369444	1.417767479	0.605134	1.367479
1.41256978	0.851043	1.395289483	0.554406	1.385206536	0.72008	1.285428
-1.48222261	0.816167	-1.64331272	0.229307	-1.360468859	0.616345	-1.51188
-1.73903455	0.862854	-1.38573071	0.769419	-1.163945513	0.951232	-4.41648
-1.80250561	0.858526	-1.38724845	0.774918	-1.264284106	0.919732	-4.40435
-1.79534796	0.858732	-1.37311844	0.781924	-1.18540672	0.945025	-4.33677
-1.83653437	0.855387	-1.38379722	0.776245	-1.205211241	0.938987	-4.32757
-1.83284635	0.855387	-1.38272116	0.77605	-1.223311522	0.931914	-4.52158
-1.63155975	0.866874	-1.11823067	0.926338	1.036611486	0.987352	-2.99839
-1.64769352	0.868143	-1.1568043	0.903169	1.02373443	0.992585	-2.8743
2.802684509	0.908555	1.003165897	0.999092	-1.285298741	0.969681	1.146107
-1.29683917	0.878109	-1.12786474	0.848002	1.11799845	0.928251	1.040014
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1.093924516	0.962335	2.012119925	0.18133	1.511971884	0.586351	1.854748
1.101262717	0.963182	2.335813643	0.163744	1.596998618	0.584945	1.402673
-1.56486907	0.908555	-1.67439508	0.660222	-2.327147049	0.615772	-1.03816
1.425487411	0.885691	2.214206803	0.365117	1.006764408	0.997444	2.100275
1.46853817	0.901232	2.261505348	0.551304	1.15853342	0.946075	1.962393
1.188538308	0.954857	1.692998747	0.700284	-1.070292629	0.973599	1.657649
1.492651044	0.872318	2.292713998	0.278984	1.376624362	0.809711	2.127754
1.487369854	0.87904	2.24420703	0.394194	1.21755045	0.912098	2.225167
-1.59568932	0.82508	-1.21778646	0.783867	-1.092281111	0.955731	1.346249
-1.80452526	0.816167	-2.66350141	0.160546	-2.114724459	0.389946	-2.0999
-1.83805677	0.816167	-2.69038685	0.152191	-2.070463704	0.379697	-2.11705
-1.82515407	0.816167	-2.66871884	0.160546	-2.169811076	0.370812	-2.01327
1.928352157	0.927048	-1.00182303	0.99937	-1.270480317	0.963405	-3.80694
1.890645962	0.930059	1.022944578	0.993386	-1.219920459	0.969681	-3.95495
1.982422662	0.926932	1.048563011	0.988223	-1.276766613	0.96359	-3.79938
1.831401782	0.934468	1.027622791	0.992486	-1.276738402	0.962526	-3.83972
1.826960986	0.935817	1.019837003	0.994328	-1.318063707	0.957343	-3.94287
-1.01038247	0.993366	1.219764803	0.574293	1.11823847	0.874339	1.295659
1.042799332	0.975873	1.214771655	0.59325	1.113907341	0.882959	1.286224
1.000375279	0.999666	1.198012219	0.648575	1.149765321	0.849859	1.336766
1.014498849	0.990203	1.191749927	0.608846	1.112310317	0.875549	1.268532
-1.0095168	0.994445	1.183994335	0.691692	1.146383344	0.862703	1.29286
1.9136811	0.829365	1.803605601	0.549613	-1.004336234	0.99861	1.169907
-1.26397006	0.920402	-2.63149847	0.172162	-1.23778983	0.875549	-2.15067
-1.14961296	0.945363	-2.30660788	0.163533	-1.131720581	0.923716	-1.85966
1.69037969	0.816167	1.523728887	0.414619	1.276742071	0.795021	1.312491
2.151182212	0.848	6.263666662	0.162719	1.323182325	0.919811	3.158213
-1.05878842	0.990076	-1.08119176	0.964822	1.208040159	0.952032	2.473345
-1.04912451	0.990169	-1.08884325	0.954776	1.153251046	0.959623	2.356863
-1.01851928	0.996785	-1.10163125	0.950211	1.131554641	0.966763	2.303734
-1.05109936	0.990076	-1.03745888	0.98115	1.175994839	0.952032	2.364219

-1.05251792	0.990076	-1.07430473	0.961583	1.199996606	0.944184	2.280861
2.441927373	0.710283	-1.46017361	0.551304	1.318057675	0.811553	-1.11216
-1.15438767	0.945363	-1.83648572	0.290194	1.037917009	0.979621	-1.26697
-1.71253518	0.816167	-1.83425792	0.290223	-1.577706426	0.603255	-1.8137
-1.65117154	0.816167	-1.77148835	0.308193	-1.594518973	0.584945	-1.70284
2.535729198	0.450722	1.610774051	0.354982	1.606500527	0.544054	1.70439
2.658711234	0.333843	1.62009568	0.330258	1.572963186	0.544054	1.689291
2.607838033	0.444152	1.664049388	0.32951	1.604468126	0.546226	1.631366
2.624264319	0.435419	1.691369078	0.314738	1.611066238	0.544054	1.665839
1.186659477	0.961884	-1.40164076	0.745371	-3.309097766	0.369859	-6.10041
1.315673665	0.938097	-1.34297846	0.783802	-3.337852255	0.36954	-5.6443
-1.19000365	0.983788	-1.06241608	0.984429	1.180711467	0.975436	-1.03161
1.547084382	0.82042	1.653396796	0.332705	1.742241599	0.465198	1.603246
1.567379434	0.816686	1.645165988	0.339174	1.62180947	0.539376	1.629756
1.522417184	0.820978	1.598236396	0.373178	1.696452801	0.497168	1.582494
1.487584283	0.825645	1.645374921	0.353038	1.824870671	0.435965	1.539234
1.551582006	0.82042	1.648504587	0.343024	1.753957526	0.465361	1.566799
-1.86529507	0.839414	-2.01413746	0.453712	-1.552087365	0.795659	-1.54634
-1.6714341	0.816167	-2.29890511	0.152191	-1.954970143	0.33139	-2.36569
1.016985556	0.990592	-1.42927554	0.376786	-1.82750744	0.268229	-1.72067
-1.35540682	0.821053	-1.6444179	0.220145	-1.411864784	0.563725	-1.79516
1.39847733	0.87732	-2.1642633	0.256328	-1.069681234	0.969481	-1.52321
-1.50285629	0.816167	-1.2327106	0.652646	-1.359544899	0.651403	-1.13168
1.068257565	0.968331	1.977413521	0.161413	1.38763042	0.627237	1.885485
1.121569882	0.961358	1.489404269	0.5204	1.011244569	0.994657	1.49784
1.12440951	0.961358	1.528774017	0.502984	-1.034179439	0.982995	1.500174
1.269783796	0.921468	2.89013072	0.16062	1.675413994	0.619855	2.257853
1.069821872	0.980734	2.350249804	0.214526	1.707650616	0.605134	1.973922
2.698318205	0.816167	-2.31223614	0.352796	1.304019063	0.889928	-1.39549
1.201184983	0.909317	1.977001809	0.165592	1.135065511	0.896556	1.6045
1.255851014	0.877817	2.016245845	0.162719	1.151737725	0.882876	1.682094
1.114754998	0.952535	2.007483843	0.176817	1.364207914	0.695072	1.887677
3.017676356	0.816167	3.096976041	0.259677	3.09008345	0.427358	2.376654
1.990942949	0.901232	2.126403483	0.520993	2.034906036	0.709893	1.505526
2.980824182	0.816167	2.810431251	0.371811	2.802516926	0.504528	2.12851
3.861778434	0.82035	4.189859647	0.308397	3.934454836	0.420129	2.663005
2.754689166	0.82042	2.644595998	0.406055	2.612391237	0.566189	2.077336
-1.99020136	0.816167	1.278040569	0.720222	1.412126098	0.741907	2.104613
1.086523502	0.958828	1.499674746	0.334889	1.482425019	0.53298	1.583469
1.05194758	0.976029	1.518075317	0.329015	1.507592588	0.520993	1.490543
1.232959647	0.887409	1.411440504	0.434344	1.411479727	0.613865	1.167392
1.308130936	0.844364	1.371479565	0.440369	1.379030283	0.611917	1.198235
1.11416538	0.953287	1.253040728	0.668047	1.245876003	0.807491	1.090204
1.287030416	0.865249	1.405833411	0.457064	1.441280487	0.606039	1.194363
1.35427719	0.82573	1.385091224	0.430256	1.375621618	0.615772	1.187193
-1.62129981	0.87301	-1.71598414	0.572855	-1.251472752	0.915062	1.026966
-1.59059025	0.87732	-1.69358512	0.576468	-1.227949764	0.923876	-1.06661

-1.65015745	0.867258	-1.75561868	0.551171	-1.35943267	0.872026	-1.08902
-1.6271997	0.866874	-1.7463639	0.540506	-1.332483824	0.877163	-1.09716
-1.61359951	0.872844	-1.69721668	0.572961	-1.269682244	0.907075	-1.11367
1.263942185	0.87732	2.220597219	0.150944	1.561943569	0.524675	2.125606
1.350857081	0.848326	1.444889202	0.434344	1.385505147	0.660012	1.299849
-6.10754501	0.51561	-1.46235569	0.745028	-2.106353348	0.647057	-2.28575
-4.12259776	0.471724	-1.25952106	0.804761	-1.631056658	0.709494	-1.6124
-1.882981	0.816167	-2.54805379	0.193771	-2.175164721	0.431282	-2.18921
-1.56397718	0.858732	-1.2211225	0.825167	1.333971745	0.84874	1.386127
2.355771739	0.816167	-1.41037282	0.711827	1.233658633	0.912984	1.199464
1.005487562	0.997746	1.206543002	0.695411	-1.075491379	0.946756	1.039624
1.308095089	0.839414	1.415601909	0.386932	1.275190738	0.71322	1.23835
4.438977921	0.86206	8.160099008	0.422354	5.912090743	0.666447	17.55901
4.713122287	0.861275	8.807947142	0.419303	6.26917848	0.666306	20.05887
4.651913762	0.86085	8.592619434	0.418437	6.424355508	0.655505	20.26474
4.777081174	0.861635	9.186090581	0.417403	6.906984462	0.651969	21.46218
4.731902345	0.863498	9.02065833	0.430348	6.407340884	0.673118	21.52017
-3.30859908	0.812971	-2.27196468	0.37936	1.203767804	0.933805	1.392666
1.450001985	0.82042	-1.27901634	0.601433	1.234126827	0.799824	-1.04465
1.831538011	0.815692	1.897498349	0.197882	1.769483071	0.402468	1.581011
1.401043189	0.823616	-1.67279268	0.256443	-1.217820322	0.812586	-1.27604
1.382872506	0.831991	-1.71434379	0.254433	-1.233917248	0.804812	-1.336
1.372728138	0.826598	-1.70822988	0.231848	-1.325927769	0.690676	-1.25034
1.376915843	0.824549	-1.64496454	0.250325	-1.225015486	0.790829	-1.31372
1.084173871	0.964252	1.976273126	0.186379	1.372585481	0.685428	1.924624
-1.40111001	0.855387	-1.59372924	0.400049	-1.221527606	0.857336	-1.38087
-1.31928539	0.904808	-1.47567041	0.566285	-2.110471596	0.431282	-2.25531
1.05865687	0.990563	2.479962135	0.50638	2.079442313	0.752536	-1.45236
-1.81982174	0.816167	-1.0101463	0.989141	-1.520970404	0.582273	-1.21778
-1.43339061	0.87732	-1.96896456	0.343024	-1.358959313	0.820639	-1.91497
-1.53598698	0.821053	-2.02570607	0.217814	-1.962282217	0.398159	-1.66274
1.161323451	0.948847	1.267579659	0.73348	-1.208129957	0.885752	1.145977
-1.36681478	0.923615	-1.06773727	0.958356	-1.396524087	0.851474	1.190473
-1.36822657	0.919175	-1.07768889	0.950001	-1.377559792	0.854123	1.159541
1.142005392	0.969958	-1.13978195	0.914148	-1.185784392	0.939483	1.048654
1.395479854	0.831991	1.355521422	0.529156	1.120929366	0.916081	-1.10739
1.442869297	0.816167	1.272314695	0.553969	1.234457421	0.75862	-1.00941
1.346774584	0.866273	2.116658199	0.188862	1.391820809	0.711132	2.066481
-1.81797418	0.80055	-1.61439058	0.303058	-1.53481701	0.536055	-1.36095
-1.44857773	0.882064	-1.67794364	0.498225	1.113232058	0.95518	1.03585
-1.01963548	0.990989	1.47668869	0.42004	1.022618196	0.985484	1.10505
-1.18093214	0.945363	-1.07819391	0.931703	-1.363062571	0.795127	-2.03409
1.748900314	0.816167	1.583831406	0.450538	1.36242384	0.774456	1.085619
1.637990664	0.82042	1.494112314	0.510482	1.335816353	0.790829	1.000634
3.029308424	0.816167	2.302004122	0.401717	1.659771384	0.772727	2.601018
3.375676551	0.816167	2.605819397	0.386135	1.790266689	0.760167	2.7879
3.197837726	0.839116	3.832348236	0.436228	3.564454224	0.63441	-1.00736

3.667166681	0.855242	4.196096825	0.502243	4.006573939	0.679946	-1.23635
-1.61917672	0.826598	-1.68360477	0.433059	-2.031979684	0.467319	-2.26485

For Review Only

<i>CH_27vsCH_34_</i>	<i>CG_27vsCG_30</i>	<i>G_30_adj.</i>	<i>CG_27vsCG_31_</i>	<i>_31_adj.P.</i>	<i>CG_27vsCG_34</i>	<i>G_34_adj.</i>
<i>adj.P.Val</i>	<i>LogFC</i>	<i>P.Val</i>	<i>LogFC</i>	<i>Val</i>	<i>LogFC</i>	<i>P.Val</i>
0.173912	-1.522793642	0.347749	1.713686883	0.165369	3.266116613	0.001377
0.157151	-1.573699417	0.305567	1.794286704	0.12956	3.306371547	0.001273
0.702435	-2.215005785	0.200677	-3.28570841	0.029649	-12.53500079	1.40E-05
0.435842	6.766853764	0.000346	7.032072328	5.20E-05	4.643143104	0.000333
0.582433	1.952724593	0.110366	2.746107906	0.008059	5.013473868	4.40E-05
0.564591	1.854920103	0.117769	2.564356528	0.008625	4.303362221	7.30E-05
0.532661	1.79508972	0.144623	2.649515162	0.007095	4.581244485	4.70E-05
0.612155	1.914638077	0.12037	2.68160055	0.009242	4.943430116	4.70E-05
0.63204	1.870159733	0.122814	2.770439322	0.00579	4.994708451	2.90E-05
0.478979	-31.81254874	0.011093	-109.7708663	0.000359	-356.4379056	1.00E-05
0.46189	-32.38371903	0.010829	-109.7569119	0.000365	-348.8045025	1.10E-05
0.454632	-34.50629001	0.010306	-108.9569756	0.000412	-318.7522845	1.60E-05
0.441165	-32.95958735	0.010964	-106.6470831	0.000415	-298.8341888	1.80E-05
0.497812	-35.84792458	0.009639	-115.8852277	0.000362	-373.3999316	1.10E-05
0.745859	-2.313083522	0.023871	-2.910487956	0.002222	-7.485870688	0
0.734934	-2.114767394	0.038192	-3.079062251	0.001105	-6.792448533	1.00E-06
0.226005	5.431326285	0.497917	10.85998643	0.250882	3.865681947	0.569882
0.210617	5.072652921	0.498301	9.301002566	0.265333	5.746323096	0.36209
0.217045	4.933717442	0.511883	9.179803623	0.273221	4.550748031	0.467437
0.217813	4.28277683	0.505128	6.636008423	0.301866	4.153045478	0.41873
0.146357	2.206980827	0.025433	2.410133016	0.007336	3.893933285	5.70E-05
0.140143	2.392884155	0.019033	2.536269807	0.00679	4.463236851	3.00E-05
0.735837	2.604197155	0.001286	3.501280073	2.60E-05	4.604867603	0
0.219126	1.46730715	0.349879	2.795373718	0.003257	4.485563275	3.10E-05
0.378844	-1.587325279	0.233167	-2.267593906	0.015408	-4.582826989	2.00E-05
0.261984	-1.649157811	0.177267	-2.429877203	0.007242	-4.076041378	4.10E-05
0.538259	2.732620085	0.224677	2.268002328	0.288964	2.323876028	0.239798
0.934336	-3.033554063	0.001034	-1.987747545	0.016476	-1.510027516	0.13917
0.980997	-3.277212667	0.001854	-2.115172627	0.02337	-1.580346322	0.156267
0.901761	-3.176948302	0.001133	-2.080841866	0.015333	-1.570104131	0.123749
0.115139	2.655546933	0.005877	4.495000077	3.90E-05	6.91052291	0
0.846319	-3.464399599	0.02042	-5.81492855	0.000627	-13.37575734	2.00E-06
0.779166	-3.32838652	0.018609	-5.586397805	0.000483	-13.21838495	1.00E-06
0.225293	2.652296826	0.244957	5.433948645	0.019945	8.712980957	0.002336
0.355799	1.647056089	0.123108	2.369048613	0.003615	5.981110392	0
0.12729	-5.140075891	0.162968	-1.815669168	0.629884	4.225204963	0.157926
0.12767	-5.020499266	0.167995	-1.78678623	0.638423	4.250055291	0.154192
0.136925	-4.671269904	0.170539	-1.79140491	0.620923	3.951498906	0.159066
0.144613	-4.525204913	0.17951	-1.771255289	0.627894	3.558398317	0.194978
0.135062	-4.809541506	0.176792	-1.750304669	0.648268	4.223279884	0.151908
0.473256	1.830266835	0.026002	2.415730585	0.000719	4.694471479	0
0.331823	1.937186304	0.019273	2.643373384	0.000392	4.955440216	0
0.680302	3.09718693	0.006267	5.938882973	3.40E-05	10.2955273	0

0.875145	-3.223911066	0.046093	-3.672173862	0.01602	-13.69042762	7.00E-06
0.42888	4.934192906	0.008966	10.4960748	0.000112	23.2817617	1.00E-06
0.315965	5.666860711	0.00722	13.02246597	7.70E-05	29.82769756	1.00E-06
0.688334	1.946774248	0.204548	1.813249516	0.218391	-1.276615977	0.623052
0.039953	3.366357477	0.044019	1.820606599	0.315052	-1.043531266	0.949424
0.823801	-4.455368608	0.007496	-6.540546983	0.000428	-9.334395558	2.70E-05
0.907544	-4.300210985	0.004434	-6.639489512	0.000145	-9.930072892	5.00E-06
0.913617	-4.059351555	0.006279	-6.636266149	0.00016	-10.30510693	4.00E-06
0.913447	-4.121079951	0.006065	-6.484453673	0.000193	-10.5617025	4.00E-06
0.928946	-4.124661107	0.007269	-6.53761311	0.000241	-9.695187128	1.00E-05
0.58424	-2.00971175	0.11234	-2.859256315	0.008556	-9.110801564	1.00E-06
0.420596	3.626570946	0.002672	6.085634483	3.40E-05	8.93324673	1.00E-06
0.557459	3.390299532	0.003506	5.627014148	4.40E-05	8.343238337	1.00E-06
0.410962	3.510671288	0.002244	5.460990467	3.80E-05	7.93882099	1.00E-06
0.412222	3.296220773	0.002452	4.858280545	5.20E-05	6.725152118	1.00E-06
0.498469	3.347934481	0.003448	5.398447075	4.90E-05	8.001089679	1.00E-06
0.116001	2.277238198	0.026739	1.98388506	0.0459	2.725843487	0.002679
0.183228	1.989858707	0.05689	1.722067308	0.107539	2.594382193	0.003179
0.271683	2.405580889	0.015268	3.934560956	0.000147	4.609027205	1.50E-05
0.257511	1.436224217	0.750282	1.57723149	0.602324	-4.220882147	0.044932
0.576378	10.1097005	0.007535	15.86125921	0.000718	31.66731041	2.70E-05
0.610389	9.868384555	0.007071	15.1266026	0.000699	30.35405489	2.50E-05
0.547316	2.283203431	0.079802	6.219342058	0.00011	9.570077136	2.00E-06
0.281798	2.351172799	0.031622	5.005711179	7.90E-05	12.1434426	0
0.19785	2.404609936	0.283016	1.003002927	0.997596	1.088670572	0.918133
0.414967	3.84077087	0.001195	4.572610232	9.80E-05	3.954861148	0.000137
0.55274	1.023989346	0.95287	1.150480133	0.625008	6.428514724	0
0.439718	1.043284584	0.916401	1.206824186	0.501323	8.659294782	0
0.43197	1.033615642	0.935994	1.284257591	0.349899	8.511638775	0
0.567784	1.038452453	0.921799	1.1983514	0.493938	7.292136708	0
0.613192	1.048514371	0.883892	1.076059407	0.775884	4.67410485	0
0.24118	4.832192473	0.538964	9.898757139	0.276585	3.169477358	0.635765
0.292086	2.518961294	0.25979	-1.122055185	0.903333	-1.181868573	0.837322
0.834161	1.047610527	0.920932	1.334679542	0.35167	5.440336851	0
0.81269	1.037515202	0.938054	1.282975251	0.430904	5.081459517	1.00E-06
0.226015	5.238066752	0.535402	13.92537746	0.223933	4.822793091	0.462963
0.816279	2.629956624	0.02968	2.69163843	0.015761	-1.209306073	0.671147
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0.853845	-1.936495359	0.020827	-2.717252472	0.000338	-5.89718854	0
0.439948	-1.784930058	0.386765	-2.351394047	0.131742	-16.49542096	4.00E-06
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0.618322	-2.322888022	0.182057	-3.2870405	0.033495	-13.08533239	1.60E-05
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0.588782	1.005999496	0.988485	-1.009143885	0.978357	-4.381506338	0

0.524062	-1.012863192	0.978681	-1.051942916	0.891435	-5.909115508	0
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0.428378	-1.004508526	0.992948	-1.045920135	0.902033	-5.260829968	0
0.438769	-1.01280252	0.976844	-1.584201	0.073707	-5.379980995	0
0.653837	-1.012950334	0.981483	-1.815746122	0.070772	-7.270174193	0
0.242326	1.661082076	0.050186	2.439538186	0.000398	5.759266859	0
0.088267	3.206092403	0.066367	3.811611531	0.021276	1.745421716	0.34452
0.094619	3.40402811	0.059112	4.162109622	0.016644	1.82810134	0.314401
0.097056	3.363893904	0.060927	4.162720127	0.016341	1.844156091	0.305275
0.097171	3.436533535	0.056177	4.016409749	0.019164	1.806786422	0.32326
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0.010968	1.922516647	0.09152	3.153321777	0.001535	3.085093587	0.0012
0.009509	2.028569906	0.070474	3.119227396	0.001906	3.325400866	0.000725
0.009375	1.949716767	0.077458	3.087655251	0.001519	3.100751053	0.000943
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0.488229	1.313922023	0.152387	1.888960726	0.000412	4.08843791	0
0.776237	1.251909146	0.311327	1.833241026	0.001719	4.012698489	0
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0.269727	1.108881206	0.79697	1.721196758	0.044146	7.588906137	0
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0.725734	-1.590015936	0.198502	-2.364007679	0.007099	-6.798139768	0
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0.177001	8.009203931	0.00419	11.53553151	0.000363	6.798111899	0.002454
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0.529775	3.046140263	0.74339	4.184656031	0.693374	1.25595541	0.94965
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0.137214	4.13181191	0.041319	5.540953191	0.007805	3.331266175	0.050568
0.135161	4.503014839	0.032647	5.801017667	0.007144	3.509407297	0.044253
0.144273	4.097224461	0.041278	5.268683527	0.009247	3.348175434	0.048174
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0.931462	-8.73737803	0.000797	-24.22954562	7.00E-06	-21.38368146	1.00E-06
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0.883597	-6.844987001	0.001224	-21.3720245	6.00E-06	-18.12427341	1.00E-06
0.645219	-2.043563344	0.027705	-2.86502703	0.000736	-4.790055683	2.00E-06
0.316433	4.965637736	0.004093	8.772437105	8.20E-05	18.40032295	0
0.602927	-2.367188155	0.179856	-3.299169641	0.036232	-12.5591501	2.50E-05
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0.629364	-2.6080693	0.029039	-6.918177585	3.40E-05	-6.610904101	1.30E-05
0.611069	-2.577950812	0.033701	-6.813087987	4.30E-05	-6.469125878	1.80E-05
0.6174	1.283656553	0.200133	1.868885833	0.000521	4.095437223	0
0.557248	-5.270690093	0.000107	-4.26993134	6.40E-05	-6.355622047	1.00E-06
0.552378	-5.43109281	7.20E-05	-4.489661899	3.50E-05	-6.414438726	0
0.611229	-5.699358665	0.000137	-4.704534425	6.90E-05	-6.985990608	1.00E-06
0.696436	-4.659948146	0.00028	-4.356974809	7.70E-05	-6.113522685	2.00E-06
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0.563209	-2.416761198	0.040476	-3.53948064	0.001866	-10.47639002	0
0.790248	-2.159624494	0.215598	-2.9145442	0.050488	-10.39454557	3.80E-05
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0.57517	-1.539305838	0.798394	2.794371296	0.516862	1.787844105	0.663164
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0.587137	-1.539749246	0.809365	3.135517723	0.49017	1.680377319	0.716371
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0.763078	-1.549817025	0.813823	2.926423394	0.644913	1.681230266	0.726858
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0.131603	4.054646452	0.001771	6.573196788	3.00E-05	10.57367209	0
0.119936	8.803793024	0.040001	19.84977157	0.002658	23.72074216	0.001028
0.112672	9.554304825	0.04895	23.55719374	0.003197	30.28752175	0.001061
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0.127164	4.031701727	0.00169	6.465452886	2.90E-05	9.561416759	0

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0.523366	2.579767922	0.254738	2.171308199	0.315854	2.226692304	0.263881
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0.145134	-3.024788944	0.012279	-3.287546484	0.003668	-2.459823958	0.020349
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0.90732	2.587865311	0.005873	3.708655715	0.000118	6.048922195	1.00E-06
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0.284613	2.307569811	0.005916	4.505819955	1.30E-05	6.84052198	0
0.398381	2.172321867	0.010862	4.305967097	1.60E-05	6.21650299	0
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0.491365	1.484146122	0.061829	2.010396622	0.000586	4.557904067	0
0.757641	1.348013278	0.192691	1.882290249	0.002216	4.216623123	0
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0.822393	-1.174135929	0.503058	1.04279091	0.864952	3.500125767	0
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0.296808	2.98489656	0.008511	2.645745939	0.010077	2.771735824	0.005275
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0.326698	1.291349676	0.706431	2.255773603	0.096577	5.690388411	0.000335
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0.644947	-1.496445791	0.086177	-1.992588186	0.001708	-4.149897076	0
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0.482847	1.589004226	0.336535	2.235888187	0.048139	5.981045241	2.70E-05
0.579225	1.49197064	0.431056	2.110848226	0.072466	5.449275544	6.90E-05
0.205476	4.719884182	0.055745	5.475194675	0.022387	2.910826941	0.140506

0.801178	-1.216585736	0.642363	-1.437477514	0.27073	-10.19407178	0
0.158967	-3.372529233	0.001246	-4.305270056	5.60E-05	-2.962628351	0.000674
0.797676	-1.220008394	0.849199	-1.818453988	0.425028	-25.70886828	1.10E-05
0.09547	-4.230039086	0.004175	-4.854323417	0.000731	-2.778926928	0.017801
0.088465	-4.265299623	0.003889	-5.039166049	0.000552	-2.847164714	0.014875
0.075568	-4.247228503	0.005101	-5.20404829	0.000648	-3.024577979	0.013023
0.084036	-4.10523614	0.00493	-5.10261936	0.000547	-2.858301934	0.015192
0.094587	-4.135047432	0.005912	-5.04314538	0.000811	-2.829916395	0.019665
0.592386	-1.05671647	0.871763	1.328814653	0.210682	4.658732928	0
0.491476	4.209552967	0.054812	9.239206367	0.001633	23.61037843	1.50E-05
0.58424	4.049955279	0.072815	9.356748653	0.002154	23.80923881	2.40E-05
0.548396	3.726766422	0.077798	7.992568497	0.002774	20.73836627	2.50E-05
0.612811	3.575593955	0.093946	8.3089624	0.002695	21.18755354	2.70E-05
0.579292	3.630820281	0.080269	8.11135489	0.002342	20.93891266	2.00E-05
0.632505	2.416078562	0.004942	4.053511592	2.40E-05	5.221666484	0
0.798815	3.328221897	0.021434	8.778689337	6.00E-05	10.40102336	7.00E-06
0.734176	-1.177871635	0.752428	-2.16479515	0.031244	-8.284117318	0
0.954298	-1.160639962	0.615663	-1.300517661	0.261635	-4.118589501	0
0.895412	-1.015449823	0.970047	-1.236016566	0.427423	-4.003939182	1.00E-06
0.462928	-1.060088076	0.919337	-1.314981553	0.492207	-8.188609689	0
0.038018	-1.570376867	0.109012	1.056389047	0.870263	2.550450491	0.000272
0.653776	-1.032939396	0.943728	-1.713047334	0.050453	-4.049707051	4.00E-06
0.641147	-1.037636265	0.941502	-1.782999341	0.055909	-4.441718324	5.00E-06
0.581246	1.719006795	0.04856	2.73053559	0.000216	4.748275559	0
0.633558	1.7220081	0.027712	2.470622099	0.000216	4.000564583	0
0.812928	1.564111891	0.018407	1.792794498	0.001176	4.17945237	0
0.931851	1.485692068	0.047621	1.747432918	0.002858	4.03871806	0
0.399264	2.971022103	0.005497	5.034281966	5.10E-05	6.221117298	3.00E-06
0.360902	-3.331056531	0.002027	-4.562208395	6.60E-05	-4.868154314	1.30E-05
0.785494	-1.391197528	0.29514	-2.514787008	0.000957	-6.187492856	0
0.272114	1.699392027	0.022753	2.228661385	0.000399	3.765972231	0
0.750564	-2.11150888	0.226633	-6.715545766	0.000719	-1.853118916	0.250295
0.262686	2.989707574	0.00124	4.887770465	1.30E-05	5.263424862	1.00E-06
0.151303	-2.851263438	0.00491	-2.835183331	0.002213	-1.044820375	0.911521
0.07632	-3.241315246	0.003668	-3.936560562	0.000329	-1.792498647	0.092424
0.52883	1.991694408	0.023191	2.923818397	0.000305	5.492572213	0
0.737596	1.007504209	0.988506	-1.277940593	0.451929	-5.862064936	0
0.919352	3.858708818	0.000797	4.71297521	5.00E-05	5.715726899	3.00E-06
0.91359	-1.572344716	0.137974	-2.827670912	0.000347	-7.473726331	0
0.875702	-1.046227513	0.948982	-1.096590374	0.868405	-5.48055196	9.10E-05
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0.621013	5.461034726	0.004055	11.5521916	4.40E-05	22.776952	0
0.624914	5.328425385	0.004293	11.39358604	4.40E-05	22.29473798	0
0.675156	5.006644875	0.005819	10.97079672	5.50E-05	21.01834026	1.00E-06
0.621477	5.773578921	0.002327	10.89140729	3.70E-05	21.80332298	0
0.359697	1.303994157	0.784397	1.385878825	0.660615	-3.450503559	0.038101

0.347335	1.496552759	0.726681	1.675687488	0.559556	-3.664310707	0.079216
0.388515	1.106377068	0.904902	-1.033409571	0.96403	-12.90249603	7.00E-06
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0.009515	2.573311442	0.093944	3.300551428	0.020049	1.491862856	0.451676
0.668206	2.525443811	0.019529	4.50507628	0.000148	4.651408994	4.90E-05
0.864762	2.696573297	0.014193	2.763460273	0.006417	7.68799188	1.00E-06
0.905442	2.51946865	0.012639	2.701180115	0.003814	7.010373024	1.00E-06
0.969935	2.718382206	0.011738	2.877805743	0.003978	8.175681799	1.00E-06
0.997246	2.723726569	0.009512	2.889699478	0.003014	8.172645882	0
0.880465	2.576710028	0.016411	2.66428938	0.00704	7.527773293	1.00E-06
0.866536	-1.264643554	0.415431	-1.712405046	0.022406	-4.281361576	0
0.629062	-1.386217532	0.189172	-1.76118767	0.010194	-4.749577964	0
0.366512	1.645711943	0.205229	2.279656503	0.017111	3.949940786	0.000104
0.768253	3.015830295	0.000653	3.951617885	1.90E-05	4.932359115	0
0.684176	3.528986927	0.000577	4.779094302	1.70E-05	5.999472592	0
0.15301	-1.246551058	0.663842	-1.337393142	0.483547	3.282063452	0.00107
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0.127893	-1.238290297	0.680264	-1.39205845	0.424064	3.334637702	0.001086
0.149839	-1.28743808	0.618579	-1.360921203	0.46696	3.228122876	0.001574
0.116482	-1.224120338	0.689191	-1.396755569	0.401944	3.305154353	0.000861
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0.082734	-4.075620306	0.009571	-5.110372855	0.001341	-2.993587049	0.020725
0.427356	-2.398569459	0.002	-2.631659401	0.000244	-5.249270811	0
0.433868	-1.087741349	0.886315	-1.465652462	0.342593	-10.85249794	0
0.982966	1.064842316	0.898078	-1.223283286	0.566935	-6.769780954	0
0.909571	1.164160695	0.73327	-1.22967658	0.565573	-6.683162788	0
0.906608	1.152651584	0.749526	-1.148655033	0.712647	-6.573935494	0
0.944222	1.080423748	0.872838	-1.17070737	0.669247	-6.604057656	0
0.922109	1.159489067	0.741968	-1.130499021	0.752062	-6.44900059	0
0.105359	1.433171249	0.614785	1.956193155	0.229907	-4.660614226	0.00301
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0.388487	-2.662974342	0.053762	-3.310367978	0.010465	2.351087872	0.056769
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0.088267	-3.627260209	0.010405	-4.624229926	0.001221	-2.916790931	0.015245
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0.613333	1.819760293	0.046334	2.584185888	0.000935	5.32229148	0
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0.230466	2.21981554	0.014778	2.875903752	0.000723	4.002447101	1.40E-05
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0.997943	2.610211071	0.001354	2.053736009	0.005458	-1.725916671	0.026739
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0.227856	-6.859189721	0.004058	-8.53707076	0.000593	-4.881095715	0.006022
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0.05187	-1.405018196	0.339935	-2.346767889	0.004848	-6.726751784	0
0.063966	-1.549361158	0.213584	-2.593829971	0.002466	-7.251976621	0
0.290961	-1.360149943	0.528432	1.316439309	0.523876	2.560476013	0.009932
0.749355	4.190414254	0.039781	17.36153483	6.90E-05	53.07358698	0
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0.525461	-1.23610488	0.735622	-2.031067775	0.112155	-17.36773831	0
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0.930182	4.203307707	0.002327	6.945001714	4.10E-05	6.109459404	3.00E-05
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0.589165	5.097457307	0.548563	6.072791028	0.525636	2.523174705	0.738576
0.281286	3.145922811	0.563793	3.402754152	0.591118	-1.133521703	0.966831
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0.599198	-2.278749035	0.003806	-2.339878558	0.001149	-1.629261675	0.044547
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0.601713	2.71975542	0.065723	5.934798203	0.000629	25.82665768	0
0.564196	5.346755714	0.029508	13.31651314	0.000515	36.84921863	4.00E-06
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0.129318	4.601951741	0.027176	5.729137251	0.006499	3.78806172	0.029313
0.11523	4.961217327	0.019458	5.737497067	0.005903	3.864715973	0.025293
0.130601	4.832779932	0.021707	5.849064134	0.005554	3.857256438	0.025917
0.111816	4.799865125	0.022693	6.065783182	0.00486	3.96147252	0.023651
0.123845	4.527210658	0.02619	5.500126555	0.006796	3.59105313	0.033316
0.307104	2.300234015	0.497955	2.322484166	0.433295	2.240042131	0.417319
0.582084	5.164829292	0.00864	11.00025855	0.000116	33.17569694	0
0.028241	-2.844242616	0.013487	-3.123464532	0.003715	-1.733458091	0.144557
0.030328	-2.900267442	0.012625	-3.019238736	0.005058	-1.721917606	0.15354
0.811278	2.699816493	0.007501	5.336903194	2.40E-05	5.430080949	4.00E-06
0.589123	-1.054864997	0.90498	-1.228804523	0.513099	-3.590534554	1.50E-05

0.842511	-2.031405844	0.002389	-1.246939589	0.315181	2.660907154	9.00E-06
0.812702	3.474827946	0.043905	11.40208111	0.000102	17.99938495	4.00E-06
0.402567	3.241012094	0.381025	3.485981112	0.293791	3.29679387	0.283747
0.009509	1.484453038	0.1371	1.740793152	0.020179	2.019238879	0.002576
0.009509	1.400712007	0.163653	1.576998791	0.034656	1.833640342	0.003791
0.01073	1.477244451	0.115311	1.645642764	0.026118	1.995256118	0.001691
0.009509	1.515943336	0.122178	1.814152019	0.014311	2.106188348	0.001775
0.112697	-2.556355576	0.004242	-2.818888026	0.000692	-1.853347763	0.028064
0.49744	2.935400351	0.005877	2.819173653	0.003676	5.759916664	5.00E-06
0.708783	2.901095756	0.021025	5.533533814	0.000189	19.52343248	0
0.604129	-2.013150406	0.017719	-3.493961317	4.70E-05	-4.322950821	2.00E-06
0.719903	-2.013509937	0.079605	-3.881877811	0.000424	-9.173254728	0
0.750827	-1.976508616	0.076366	-3.870033829	0.000299	-8.959903981	0
0.653524	-2.041193278	0.087006	-4.207554458	0.000362	-10.18944175	0
0.636328	-1.906616745	0.102041	-3.818868404	0.000403	-9.179750607	0
0.671707	-1.911145346	0.115428	-3.981570078	0.000429	-9.598866896	0
0.470326	2.249852147	0.001907	3.490334504	1.30E-05	4.079038935	0
0.318937	1.369948215	0.237858	1.859523195	0.0078	4.273818428	0
0.355528	1.377086098	0.266393	1.954004283	0.00722	4.632793675	0
0.460532	1.405335424	0.231964	1.96259692	0.006953	4.792297369	0
0.35541	1.349769253	0.252801	1.864298755	0.006413	4.011522857	0
0.101358	2.79354062	0.001511	3.48154644	6.50E-05	5.279923725	0
0.130254	3.026068807	0.001996	3.953105378	7.50E-05	6.272280684	0
0.846899	-1.282854186	0.3178	-1.702799378	0.01192	-5.100421052	0
0.702275	-1.233532318	0.431105	-1.533068641	0.049206	-4.877549815	0
0.775969	-1.286013165	0.272567	-1.602670549	0.016645	-4.80649014	0
0.854848	-4.035564472	3.10E-05	-4.77768595	2.00E-06	-2.069011115	0.001481
0.208062	-2.105629121	0.119153	-2.939629988	0.012623	-1.393248902	0.458863
0.22234	-2.183081483	0.108295	-2.957046302	0.013948	-1.43823274	0.422718
0.161906	-2.167536687	0.04896	-2.737076096	0.005738	-1.841269336	0.079504
0.135793	-1.96876584	0.062261	-2.486619735	0.00665	-1.838714034	0.057486
0.522173	-1.984096624	0.101549	-2.798779444	0.007128	-8.70158472	1.00E-06
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0.727652	-2.625657398	0.005469	-3.741150738	0.000115	-4.267703218	1.30E-05
0.613845	-1.763451649	0.133814	-2.283145211	0.015342	-7.780373623	0
0.393043	-1.445185691	0.399627	-2.449808277	0.012812	-3.931433696	0.000177
0.558186	-2.203000124	0.059895	-2.913200354	0.005884	-9.45086672	1.00E-06
0.796517	-2.36153584	0.052038	-3.560576303	0.002235	-10.90882853	0
0.639665	-1.744515693	0.148963	-2.422865914	0.010501	-7.682452333	0
0.535725	-1.922644881	0.078583	-2.517712241	0.006929	-7.817138399	0
0.181236	3.487900096	0.203329	4.109088596	0.108015	2.728302901	0.241365
0.698219	-1.8752426	0.224412	-2.159070409	0.093156	-9.199291309	6.00E-06
0.976688	2.411018944	0.355197	3.774538342	0.100735	4.947779058	0.047669
0.995451	1.984999795	0.473723	2.879145176	0.18173	4.333479719	0.045459
0.547211	-4.194288731	0.00897	-4.606827839	0.002637	-4.9546957	0.001141
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0.874364	-8.79274798	0.002184	-20.34821003	3.00E-05	-32.6480716	1.00E-06
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0.213014	-3.848424247	0.004058	-5.065513894	0.000271	-3.544295172	0.001979
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0.812545	1.08029011	0.912297	1.83798816	0.169755	5.165100667	0.000164
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0.197947	-2.298312324	0.003952	-2.633511059	0.000369	-1.571770245	0.067348
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0.643973	3.476223549	0.02315	6.254126277	0.000537	11.48640306	8.00E-06
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0.442258	6.896879562	0.323856	7.080332308	0.266082	6.933400258	0.178162
0.073893	-1.013133286	0.990058	1.097217633	0.904288	-1.36975009	0.610754
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0.180641	3.817308955	0.227395	4.252096106	0.146417	3.584891567	0.178448
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0.032044	-1.389009366	0.50978	1.061244434	0.909671	1.358421604	0.44744
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0.160484	-2.515041526	0.00358	-3.178726771	0.000153	-2.100267871	0.006327
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0.120763	2.40713755	0.020324	1.849675428	0.079874	2.148339569	0.022082
0.111816	2.341196945	0.021253	1.831368797	0.077405	2.23038581	0.014107
0.933847	-5.753024074	0.028666	-10.01041247	0.002215	-46.4809377	3.00E-06
0.410747	1.782523802	0.036548	2.549570305	0.000481	4.146225593	1.00E-06
0.23871	2.262109965	0.045812	4.050183761	0.000421	10.5651493	0
0.464789	1.188074462	0.632121	-1.061752214	0.863186	-6.411565555	0
0.960982	-1.684340555	0.214243	-3.277041889	0.00167	-10.41061207	0
0.891019	-3.227780382	0.027936	-5.560623267	0.000795	-21.03445059	0
0.981397	-1.053083471	0.925548	-1.515356685	0.24255	-9.550944207	0
0.218219	2.150442565	0.051194	4.040115924	0.000286	3.543464935	0.000457
0.239038	2.277546282	0.03927	4.214555461	0.000257	3.420204087	0.00076

0.71938	1.009723793	0.986602	1.499055905	0.258957	6.998784751	1.00E-06
0.723307	9.934229274	0.000132	8.627114059	3.90E-05	7.995964665	1.80E-05
0.693083	10.64355938	1.00E-04	8.841691205	3.50E-05	8.229651877	1.50E-05
0.688231	10.03146975	0.000107	8.75614104	3.10E-05	7.814576813	1.60E-05
0.664148	10.27028806	8.40E-05	8.37335504	3.10E-05	8.003517086	1.00E-05
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0.090948	-3.619341675	0.011704	-4.479396217	0.00169	-2.22596942	0.074214
0.094181	-3.494321358	0.015524	-4.380349545	0.002257	-2.105461807	0.104019
0.104452	-3.494738162	0.016773	-4.369703599	0.002567	-2.140905317	0.100627
0.069357	-3.714141163	0.009692	-4.548680979	0.001434	-2.208234173	0.074698
0.648078	1.617563988	0.631677	1.408461676	0.704556	1.418398824	0.665318
0.649259	1.647694431	0.601839	1.41690108	0.688236	1.431172812	0.644253
0.006113	1.02586826	0.965718	1.799286524	0.094525	1.219761681	0.592013
0.005289	-1.060438506	0.92009	1.816339081	0.09951	1.262806637	0.535517
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0.564196	-1.298944107	0.334267	-1.54419735	0.058192	-5.175158152	0
0.658789	-2.088423932	0.0031	-2.653539312	7.00E-05	-3.794352966	0
0.458241	1.20777893	0.54701	1.732408776	0.022525	5.302118578	0
0.473563	1.141021631	0.692299	1.688636091	0.027982	5.168274015	0
0.472864	1.088397472	0.814326	1.752799571	0.019294	5.179777858	0
0.489966	1.176233111	0.62079	1.692276702	0.030835	5.297440017	0
0.438212	1.158533978	0.682637	1.594177847	0.073799	5.101329152	0
0.110946	1.726360159	0.075458	2.273348892	0.003923	3.89863634	7.00E-06
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0.170298	2.22856516	0.015792	3.62919713	0.000112	8.135417798	0
0.186802	2.190756286	0.015361	3.563291856	1.00E-04	7.402220532	0
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0.239748	2.061435437	0.021536	3.583862924	7.50E-05	6.821062692	0
0.547211	-1.562602958	0.315686	-4.016739344	0.000466	-11.83845317	0
0.556342	1.673543057	0.072449	2.316794979	0.001766	4.550818629	1.00E-06
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0.512807	8.084429321	0.002413	17.4815852	3.70E-05	30.04249588	1.00E-06
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0.673805	-1.644783362	0.034272	-2.660778235	6.00E-05	-4.050348674	0
0.839903	-1.381209213	0.182073	-2.222354965	0.000415	-4.04802183	0
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0.578936	10.71025413	0.004201	9.87533077	0.002381	16.50923473	0.000183
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0.441525	1.765008632	0.096429	2.563090431	0.002937	5.345488037	2.00E-06
0.335832	1.819903457	0.081177	2.67699979	0.002148	5.686121927	1.00E-06
0.969671	2.955616084	0.015722	3.957557134	0.001197	5.27741715	8.30E-05
0.436065	5.066032835	0.001242	9.079986903	1.80E-05	13.93404709	0
0.476712	4.61353215	0.002593	9.074821046	2.50E-05	13.41279354	1.00E-06
0.104584	-3.008037547	0.004289	-3.399725969	0.000658	-2.327529063	0.010793
0.689853	-3.403749741	0.003127	-7.372284267	1.30E-05	-9.758394685	0
0.672707	-3.957779675	0.003467	-9.223553709	1.50E-05	-12.04674471	0
0.411563	5.083509718	0.563887	9.651000731	0.401446	3.392276791	0.644943
0.401713	4.841036869	0.559303	9.545827789	0.309901	3.166992083	0.651819
0.296352	5.05048545	0.542296	12.66345579	0.239728	5.018770247	0.472868
0.30742	4.688294375	0.572107	9.342734215	0.389872	3.190808994	0.651816
0.232439	5.181233721	0.521873	11.77220645	0.241555	4.889345657	0.468688
0.820464	-2.05149733	0.009485	-2.620040948	0.000322	-4.46816394	0
0.828554	2.682996003	0.002168	4.579244774	1.40E-05	7.856087349	0
0.945414	2.538937873	0.005534	4.700897171	1.90E-05	7.763469566	0
0.84823	2.692615852	0.002228	4.647921716	1.40E-05	8.036249432	0

0.910887	2.71453689	0.002313	4.691548452	1.40E-05	8.219577029	0
0.894153	2.778430112	0.001952	4.558537948	1.50E-05	7.957259356	0
0.395464	2.178748787	0.027477	2.486931087	0.005523	4.226796164	2.60E-05
0.957715	5.652314092	0.000486	8.593909658	1.40E-05	10.94380502	0
0.948208	4.477812577	0.000702	6.26937122	2.40E-05	7.822550202	1.00E-06
0.922508	5.256673337	0.000533	7.806861829	1.60E-05	9.927064809	0
0.411144	2.303548613	0.007972	3.536146289	7.10E-05	5.820728882	0
0.72914	-1.047361716	0.892544	1.050533327	0.860573	4.010563582	0
0.233445	2.944237373	0.020323	5.272790095	0.00027	11.16317576	1.00E-06
0.216568	3.172294815	0.01397	5.670921804	0.000186	12.77777421	0
0.248266	3.117484282	0.014331	5.506646995	0.000198	11.15229234	1.00E-06
0.285421	3.179759522	0.018672	5.58456323	0.00033	12.48758657	1.00E-06
0.197248	3.290501485	0.011477	5.283732993	0.000281	12.0536867	1.00E-06
0.348961	-1.41988417	0.33498	1.230597938	0.556482	3.535295587	6.60E-05
0.196784	2.479241333	0.299697	2.247771352	0.312271	2.202563737	0.291183
0.374122	-2.832164061	0.032435	-4.34255426	0.001472	-20.04898334	0
0.285707	-2.580742926	0.050911	-4.199484924	0.001725	-18.77576509	0
0.207665	4.087642775	0.133309	5.184911106	0.051945	-1.568608224	0.61973
0.546633	-1.184308112	0.613056	-1.292641725	0.341062	-4.972943741	0
0.885854	1.214400721	0.805653	3.122321762	0.030768	5.390661824	0.001197
0.817006	-1.385858367	0.690574	-1.129596389	0.875576	-16.81244684	8.00E-06
0.273192	1.838146253	0.082318	3.268335835	0.000447	12.08713072	0
0.246323	2.454704837	0.00991	2.493732419	0.004405	4.378166846	1.30E-05
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0.20714	2.638876814	0.004664	4.097863709	5.00E-05	5.814430294	1.00E-06
0.863008	-1.208261711	0.773176	-2.10302661	0.101142	-14.29119727	0
0.544608	1.404591282	0.076474	1.099500037	0.649835	-3.14163764	0
0.734579	2.751055632	0.059635	3.386839464	0.013423	8.842023305	2.60E-05
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0.676849	-2.418154593	0.101813	-5.045663651	0.001359	-21.36028047	0
0.125551	1.938652747	0.050421	2.726779199	0.001678	3.777109678	4.20E-05
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0.110946	1.614532388	0.162345	1.976903894	0.025559	2.498015336	0.002192
0.456774	6.204466312	0.000364	12.5491996	5.00E-06	10.59805711	1.00E-06
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0.348068	2.196407267	0.181991	3.436606582	0.018017	4.549145147	0.002914
0.066606	1.478652639	0.23651	1.757471965	0.05079	2.562493434	0.000945
0.324869	2.65466098	0.136561	2.912225287	0.071942	3.703597965	0.020725
0.302226	2.484372445	0.148763	2.833877816	0.066618	3.663918786	0.016684
0.319746	2.863481673	0.114689	3.271920401	0.05033	4.115085075	0.014817
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0.285696	3.069007263	0.111551	3.631612539	0.043693	4.713692971	0.011656
0.89834	-3.322698659	0.023386	-5.745129803	0.000611	-21.7231111	0
0.127389	1.190509016	0.875349	1.399439373	0.694785	1.189241608	0.830892
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0.408677	2.792456001	0.492341	2.764092389	0.601681	2.387336622	0.530319
0.186307	1.960902857	0.45361	3.158935806	0.118946	2.582307865	0.180127
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0.510708	4.030648695	0.38712	3.989182158	0.336454	3.614718842	0.235108
0.560082	-1.419460961	0.415798	-2.6808082	0.005483	-10.52987937	0
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0.523691	-1.440562009	0.389769	-2.629509426	0.006218	-10.00635638	0
0.740678	1.405524534	0.222888	2.297236722	0.001018	4.189409715	0
0.274706	8.009499288	0.049535	7.913286973	0.037279	7.631662607	0.037988
0.695324	4.629672951	0.424996	4.216143408	0.398011	4.158283597	0.364299
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0.167172	1.758181417	0.114117	2.873230452	0.001495	9.123921642	0
0.197947	1.949844225	0.027957	2.850406644	0.000399	6.138774514	0
0.634815	1.045167792	0.923586	1.469257692	0.184809	4.280123643	3.00E-06
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0.307256	2.301229385	0.123505	2.973259963	0.025669	3.033454748	0.024892
0.290605	2.689658228	0.080493	3.584586179	0.013715	3.834225623	0.007209
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0.137151	-2.395214994	0.001446	-2.741386606	0.000101	-1.410918436	0.132771
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0.827398	1.650871479	0.26575	2.261004653	0.03564	2.063166431	0.052069
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0.11546	2.000924235	0.010737	3.244437959	3.60E-05	5.209779421	0
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0.122945	2.284344727	0.010759	4.260826657	2.70E-05	7.459654624	0
0.846609	-1.361392845	0.257717	-1.597144848	0.047307	-4.408453529	0
0.227856	1.834074672	0.036375	2.965133568	0.000172	5.739026239	0
0.226307	1.820257494	0.051088	3.214949813	0.000146	6.344641236	0
0.101268	-2.16926491	0.012006	-2.4666643	0.001753	-1.366193705	0.266217
0.616867	-1.587929466	0.171535	-2.248300222	0.007649	-7.024503523	0
0.578969	-1.408675192	0.340462	-1.99599754	0.022533	-6.214569991	0
0.362456	-1.502656102	0.264186	-2.222995986	0.01214	-7.012222027	1.00E-06
0.425822	-1.477794455	0.199606	-2.115783773	0.005585	-6.57705302	0
0.504891	-1.622832663	0.202451	-2.592020177	0.00481	-9.113864636	0
0.260887	-1.474757879	0.642114	-2.357809781	0.17752	-7.096715049	0.001205
0.919019	5.725545385	0.029409	2.583118959	0.219753	2.897169689	0.138543
0.979581	5.672775677	0.075539	3.167069375	0.217787	2.255350327	0.37117
0.985898	5.521366162	0.075316	3.035491143	0.228609	2.143030964	0.396514
0.974537	5.877849096	0.079621	3.128069545	0.240763	2.201288012	0.404324
0.986031	5.610660433	0.080269	2.954643387	0.255638	2.176917246	0.399046
0.998455	6.535089813	0.065737	3.236307777	0.231689	2.288166156	0.385511
0.453462	-4.140561604	0.001561	-5.563309321	7.30E-05	-10.44417616	0
0.965137	-1.791675021	0.021408	-2.155018837	0.001385	-4.285821746	0
0.413037	7.151239809	0.002721	14.3739322	4.80E-05	23.60194473	1.00E-06

0.984125	-2.153615383	0.009737	-3.069298836	0.00014	-4.73746384	1.00E-06
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0.930187	-2.638675968	0.01373	-3.868639295	0.000385	-10.92085166	0
0.123196	-2.600191881	0.011718	-3.216656024	0.001104	-2.126263092	0.023208
0.106266	-2.870493502	0.00719	-3.398495517	0.000898	-2.12369013	0.026895
0.225647	-2.990922806	0.001129	-3.4966223	8.10E-05	-2.237760146	0.00378
0.240086	-2.994691774	0.001055	-3.579624251	6.30E-05	-2.193795324	0.004352
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0.324435	-2.869081939	0.002047	-3.572433298	0.000103	-2.265479119	0.004653
0.217384	-3.11345223	0.00089	-3.559149294	7.40E-05	-2.290827632	0.00308
0.13749	1.677494771	0.497738	3.195744382	0.054037	1.573948563	0.467416
0.139444	1.663713688	0.515497	3.358178366	0.048139	1.608764242	0.451962
0.902299	-1.594301593	0.095172	-1.984677741	0.007379	-4.048026561	1.00E-06
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0.643417	-1.459260545	0.404655	-2.170594037	0.037731	-6.195334152	6.00E-06
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0.623702	-3.810096025	0.01636	-5.925609105	0.000811	-14.25231053	3.00E-06
0.194812	2.018607455	0.195107	3.162496279	0.016058	3.910954894	0.003382
0.246618	2.258824033	0.140074	3.34045685	0.015099	4.287938438	0.002639
0.441861	1.275008652	0.585897	3.622199849	0.000319	10.68284159	0
0.458241	1.2743569	0.58246	3.494088846	0.000386	9.597190005	0
0.956536	-2.544117212	0.005096	-4.252492856	3.00E-05	-3.979438294	1.40E-05
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0.98767	-1.413424088	0.217457	-1.471855729	0.123956	-4.273634385	0
0.982315	-1.405286545	0.204686	-1.51209844	0.082744	-4.084417074	0
0.744351	-1.149102527	0.682504	-1.358124707	0.232928	-4.186565141	0
0.080821	-2.62018601	0.000293	-4.124132861	2.00E-06	-1.774213064	0.004899
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0.076849	-2.905565142	0.017824	-3.685303593	0.002014	-1.894433705	0.109871
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0.413002	2.725726803	0.002137	3.319881949	0.00012	6.546929253	0
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0.927073	2.377137748	0.00132	3.029631631	3.30E-05	4.112869522	0
0.908677	3.705587762	0.043492	4.788322388	0.009033	6.957317227	0.001724

0.6174	1.692810075	0.051311	2.115060575	0.00303	4.327681553	0
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0.061293	2.454508029	0.079945	2.549594521	0.046455	1.625387487	0.302306
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0.551021	1.56750156	0.261987	3.594722593	0.000441	11.61143725	0
0.556121	1.568518638	0.26532	3.520734015	0.00056	10.92049785	0
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0.112507	-3.001385391	0.005683	-3.358453698	0.001057	-1.984154639	0.045822
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0.919019	1.318771579	0.369958	1.682168475	0.043297	7.21493336	0
0.944736	1.37168449	0.30564	1.773904442	0.028985	7.673563006	0
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0.964957	1.313686332	0.414915	1.67057051	0.062349	7.713191704	0
0.582271	4.068364203	0.004631	6.700093806	9.80E-05	10.77243335	2.00E-06
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0.446919	4.992532081	0.433764	5.12836311	0.54012	3.299590214	0.63317
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0.56529	1.952771164	0.038017	3.150195285	0.000292	9.222240367	0
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0.829307	-1.509787639	0.58589	-1.863295675	0.309297	-19.05059398	3.00E-06
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0.692127	-2.005510106	0.087006	-3.389884522	0.001398	-10.32343559	0
0.672099	-1.944270617	0.105748	-3.434854147	0.001323	-10.43221622	0
0.729051	-1.898128363	0.117068	-3.462646053	0.001157	-10.24664339	0
0.654286	-2.029637506	0.07775	-3.371797157	0.001317	-10.43459305	0
0.25816	1.815687027	0.039662	2.526159686	0.000851	4.57463935	1.00E-06
0.27596	1.898411548	0.031615	2.673153586	0.000627	5.303182542	0
0.329037	1.898171717	0.028104	2.486413703	0.001073	4.52711799	1.00E-06
0.822611	-7.176564473	0.002168	-16.10459754	2.50E-05	-26.90337023	0
0.887207	-6.646959959	0.00217	-13.76222665	3.00E-05	-23.73006677	0
0.83173	-7.350835279	0.002042	-16.40962896	2.50E-05	-27.74659391	0
0.800068	-7.38189713	0.002165	-16.13768101	2.80E-05	-27.43150624	1.00E-06
0.859498	-6.387011027	0.002047	-14.44536552	2.00E-05	-24.69562892	0
0.739265	1.83298016	0.020056	1.936139972	0.006148	4.312907273	0
0.968893	2.88024851	0.00547	4.272678454	0.00011	5.284656367	7.00E-06
0.704678	2.661302751	0.002598	3.878249091	3.60E-05	4.873197386	1.00E-06
0.739633	-3.02412472	0.032525	-3.562091335	0.008068	-12.22901806	2.00E-06
0.562968	1.666431112	0.15931	2.007348165	0.03126	4.105478538	3.10E-05
0.89411	-1.88749069	0.008567	-2.699660039	5.80E-05	-4.524815564	0
0.907106	-1.77777573	0.017443	-2.560790338	0.000112	-4.420103776	0
0.120763	-2.705107161	0.004762	-3.314321036	0.000341	-2.716776384	0.001297
0.214936	2.246162335	0.005262	3.24769171	5.90E-05	4.29143812	1.00E-06
0.800081	-2.307022694	0.010744	-2.589244978	0.001878	-4.673557922	3.00E-06
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0.228603	2.085179319	0.508774	1.925531694	0.50781	1.395083201	0.731846

0.227366	1.993122425	0.538673	1.914352887	0.509365	1.366802255	0.747461
0.21964	4.099539753	0.202217	4.029642116	0.165876	3.005962232	0.255385
0.115699	-2.771698504	0.016018	-8.091301385	2.20E-05	-3.281345192	0.00195
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0.120377	-3.003346398	0.008989	-3.576267594	0.001249	-1.829167213	0.102503
0.233369	1.672184768	0.086109	2.714020109	0.000506	6.558070491	0
0.104584	1.016554326	0.980066	1.70490684	0.180718	4.67822038	9.10E-05
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0.511246	2.130361751	0.256335	1.618336081	0.45454	-2.025372233	0.213571
0.981397	2.553894721	0.119497	2.579147938	0.084984	-1.32792797	0.62889
0.964935	2.096705442	0.135062	2.008156541	0.125976	-1.382204908	0.48632
0.728513	2.414984767	0.066341	2.238250413	0.069066	-1.49356073	0.370241
0.925025	2.812313923	0.01485	2.994597253	0.005206	-1.259735761	0.57769
0.973929	3.207542745	0.021975	3.395292852	0.009235	-1.172643299	0.762157
0.389332	3.014609829	0.086047	4.952151503	0.00674	1.594034485	0.441358
0.60538	2.334681077	0.167569	2.770199737	0.063809	-1.03763078	0.954977
0.847735	2.575282559	0.049414	2.652230558	0.027494	-1.217979998	0.684338
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0.317933	1.327343913	0.647523	1.913789718	0.165858	3.571044243	0.003867
0.246384	1.440625929	0.547822	2.083577829	0.124052	3.741935767	0.00366
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0.232512	1.428951192	0.561067	2.03926514	0.139481	3.707760293	0.00408
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0.341718	3.077309211	0.000688	4.78291836	1.00E-05	3.981670069	4.00E-06
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0.133881	1.533239094	0.532014	2.201302744	0.147239	2.061728104	0.161797
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0.79651	2.336173281	0.126104	5.13583452	0.001474	7.451592208	9.20E-05
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0.930561	-1.663601457	0.047312	-2.394970892	0.000444	-4.156388573	0
0.276657	-1.167172855	0.610112	1.421929896	0.128419	4.065278714	0
0.813816	4.899173319	0.071076	2.490093248	0.288696	2.723894572	0.206543
0.815747	4.997405234	0.067197	2.508557892	0.283686	2.77099769	0.198029

0.843747	5.041598019	0.061343	2.41022417	0.299854	2.612570461	0.220279
0.798273	5.173166145	0.058352	2.543130221	0.269953	2.748455346	0.197027
0.804982	5.016686671	0.060372	2.508432068	0.271693	2.713738459	0.197459
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0.740392	2.608387392	0.002398	3.306329324	9.20E-05	6.381735183	0
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0.25493	1.327189765	0.444039	2.007754559	0.019452	10.25704613	0
0.052308	1.079946746	0.874813	1.156510449	0.699395	2.867596191	0.000631
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0.404277	-1.238017472	0.509027	-1.567577592	0.078503	-5.409114204	0
0.467159	-1.297547475	0.378419	-1.619432393	0.050237	-5.349353334	0
0.679644	2.416924206	0.076543	4.911346274	0.000797	2.269320697	0.061629
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0.422617	3.423853983	0.627342	3.860221144	0.579387	1.575702098	0.882529
0.728513	3.921309265	0.001714	4.565178479	0.000188	1.190944626	0.670783
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0.767459	3.939117075	0.001378	4.802268487	0.000104	1.180572753	0.6796
0.830125	3.791466441	0.001598	4.847543691	8.80E-05	1.20972136	0.627367
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0.160031	1.418444694	0.293333	2.085167406	0.009856	2.675625998	0.000516
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0.180396	1.368870486	0.340225	2.194549418	0.004957	2.733685656	0.000305
0.716196	2.763167993	0.002656	3.927889987	5.00E-05	4.805834311	2.00E-06
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0.844658	-2.457937088	0.054816	-4.106785102	0.001427	-13.15260509	0
0.883833	2.51435851	0.010879	3.663990081	0.000242	4.453386453	1.90E-05
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0.402187	1.581478507	0.094459	2.221955765	0.001786	3.160882244	1.50E-05
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0.593957	2.184033968	0.032623	2.816392121	0.002589	4.694213521	1.60E-05
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0.704272	1.68927558	0.097298	1.515854666	0.161198	-2.723094149	0.000488
0.393616	1.633507991	0.506874	1.336023253	0.678576	-4.467708798	0.007522
0.388515	1.601574535	0.499034	1.30158251	0.69172	-4.229549647	0.006545
0.385278	1.59614527	0.515707	1.318599811	0.683576	-4.341900363	0.006831
0.183196	2.021062491	0.377676	4.2612697	0.028401	1.561400149	0.522233
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0.562358	-1.181087168	0.784385	-1.558514392	0.314436	-13.36747895	0
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0.928572	1.00169407	0.997818	-1.333025716	0.4687	-9.565646306	0

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0.371434	3.290982739	0.004538	4.696194512	0.00015	10.86348209	0
0.323521	1.05427067	0.911401	1.474415833	0.200872	3.380999954	5.50E-05
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0.888067	3.538354922	0.002047	3.704321939	0.000485	4.222345113	8.60E-05
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0.595646	-1.770170227	0.273867	-2.283094992	0.067345	-12.97733236	1.00E-06
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0.551095	-1.711712128	0.278462	-2.152517813	0.073765	-11.92651216	1.00E-06
0.618742	-1.669965041	0.236883	-2.050868149	0.058254	-10.45261195	0
0.444755	1.507574693	0.397028	1.370403966	0.484356	-2.922831038	0.005538
0.763525	3.383808244	0.033232	10.03656972	8.30E-05	15.07487285	3.00E-06
0.873619	-1.698566594	0.019887	-2.456020162	1.00E-04	-4.29580742	0
0.588974	1.177478089	0.934368	1.524385089	0.790258	1.406871508	0.800641
0.052818	1.551764662	0.517638	1.749801087	0.327167	-1.390884331	0.556659
0.059759	1.560831616	0.516981	1.785524278	0.314389	-1.308132732	0.643655
0.853267	-1.475950705	0.135558	-2.209527794	0.00109	-5.269362708	0
0.835585	-1.394439671	0.21622	-2.167186858	0.001428	-5.316489165	0
0.848455	-1.780248471	0.480106	-1.290273357	0.751923	-22.85975939	8.00E-06
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0.080886	-4.077649302	0.006582	-2.596547048	0.041273	-2.461694039	0.044546
0.655698	-1.441864925	0.352748	-2.428789224	0.007444	-9.625065522	0
0.659563	1.681824754	0.189027	3.388574041	0.000804	4.2251838	6.60E-05
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0.328808	1.244299952	0.488084	2.106316554	0.003285	4.482061519	0
0.059759	1.872666614	0.08851	4.099204244	0.000123	9.016834946	0
0.052818	1.632294258	0.187273	3.848042527	0.000165	7.105308958	0
0.103731	1.810030426	0.131989	4.322975768	0.000148	8.773959862	0
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0.510743	2.185427599	0.011204	2.959299194	0.000292	5.465592199	0
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0.296359	1.111226831	0.695672	1.724707922	0.005088	4.010781744	0
0.3353	2.292988953	0.051863	4.48848689	0.000318	13.31881903	0
0.640117	3.416859919	0.005266	3.810561208	0.00108	14.94576177	0
0.622131	3.352662854	0.006597	4.014803226	0.000875	14.8726849	0
0.697688	3.652533403	0.004801	4.076217686	0.000979	16.35856505	0
0.633646	3.538967342	0.005263	4.01059907	0.000986	15.09763177	0
0.624914	3.442988126	0.00574	4.042466133	0.000845	14.95862374	0
0.83173	-9.654851272	0.001884	-16.09933651	7.90E-05	-29.86782155	2.00E-06
0.974537	-5.201553238	0.001466	-8.131917905	4.00E-05	-14.95157916	0
0.92035	-7.365330615	0.001669	-12.6619625	4.70E-05	-22.7326284	1.00E-06
0.936086	-7.046443702	0.001654	-11.74571964	4.90E-05	-21.27916811	1.00E-06
0.966399	-5.29656946	0.001323	-8.514413647	3.20E-05	-14.33905261	0
0.266209	3.367485268	0.002342	4.707679573	7.10E-05	5.222984231	1.00E-05
0.313344	3.026305095	0.006288	4.532422752	0.000145	5.067523993	2.50E-05
0.302639	3.164467111	0.00451	4.50149025	0.00014	5.17105996	1.90E-05
0.245141	3.381007897	0.002614	4.861070342	6.90E-05	5.685146655	7.00E-06
0.295856	3.068616271	0.005295	4.43286738	0.00015	4.982287372	2.40E-05
0.305316	2.643589853	0.049696	5.812985542	0.000288	13.15161277	1.00E-06
0.679506	1.866701409	0.044457	2.396124333	0.002701	5.740769115	0
0.760113	-3.504596348	0.034014	-4.311166489	0.007693	-13.93522165	8.00E-06
0.843747	3.191323825	0.008128	3.071611504	0.005154	8.599364521	2.00E-06
0.321418	1.981419673	0.023891	3.193346416	0.000135	6.96703622	0
0.341718	2.044608287	0.022408	3.322407187	0.000135	7.07776146	0
0.323248	2.117524278	0.014449	3.11995527	0.000179	6.921517502	0
0.352264	2.095474519	0.016458	3.31516546	0.000111	6.994102958	0
0.295206	1.957083862	0.024743	3.090860714	0.00016	6.506929201	0
0.38328	4.044477615	0.003532	8.950985137	1.80E-05	15.73300867	0
0.407819	2.137390151	0.027748	3.496737391	0.000239	7.896576747	0
0.282071	1.307623819	0.302136	1.407589991	0.131967	4.111539413	0
0.16473	1.39480863	0.485351	2.56975436	0.012598	2.019580835	0.052974
0.031204	-1.59070605	0.393444	-2.117769764	0.099306	-6.894990084	3.70E-05
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0.218162	-1.648703675	0.245754	-1.111086978	0.826896	1.79814263	0.104309
0.1241	1.768089044	0.012174	2.112063077	0.000583	3.435068352	0
0.806793	-1.098052393	0.823509	1.327859222	0.346154	3.944643089	6.00E-06
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0.186714	1.651568433	0.391518	4.045728307	0.004292	2.268383843	0.078515
0.196	1.659006833	0.3739	3.96269641	0.004054	2.316584402	0.064906
0.174648	1.692686276	0.35593	3.748905304	0.005991	2.173094845	0.091731
0.593193	2.126677943	0.004758	3.372906763	2.10E-05	4.035811006	1.00E-06
0.208837	2.653885097	0.057897	2.867282189	0.025663	2.286448558	0.068986
0.716337	-1.546652827	0.103847	-2.372349968	0.000676	-4.84089462	0
0.622246	-1.077327284	0.861924	-1.513184012	0.139176	-4.690714004	1.00E-06
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0.290605	2.385979082	0.007772	3.52766747	0.000106	6.372550078	0
0.425822	1.260371689	0.44018	1.838908162	0.012026	3.553825245	2.00E-06
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0.923033	-1.555664589	0.191874	-1.72790266	0.069338	-6.699905061	0
0.604661	1.098217586	0.791643	-1.175284682	0.556844	-4.39612006	0
0.569926	1.207475592	0.589885	-1.149067828	0.658968	-4.334149778	1.00E-06
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0.211963	1.878854642	0.024439	2.514944009	0.00063	5.96067249	0
0.171774	1.825266891	0.02031	2.670271428	0.00015	6.167020368	0
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0.225379	1.809003908	0.028508	2.560474146	0.00037	6.205846346	0
0.406237	3.633803826	0.025187	5.333571663	0.002052	4.169147694	0.0055
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0.198917	1.925793797	0.03437	2.919332826	0.000389	5.946905234	0
0.175992	1.928286429	0.026058	2.867030804	0.000278	5.501703164	0
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0.739645	-1.547886484	0.137765	-2.481268205	0.000931	-5.774902918	0
0.830671	-1.627925153	0.094905	-2.607046719	0.000574	-5.737237224	0
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0.268367	-2.269263905	0.008984	-2.1044325	0.009247	1.442137038	0.190759
0.032414	1.449256317	0.350995	2.029921397	0.033852	3.715188578	0.000117
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0.969784	1.894847095	0.019726	2.230163919	0.001868	5.181538054	0
0.792661	1.209717507	0.659215	1.172404846	0.673964	6.386121818	0
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0.984962	9.119807466	0.009177	34.38492859	5.10E-05	70.88195033	1.00E-06
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0.966657	8.686954944	0.010917	32.81930959	6.10E-05	65.96398459	2.00E-06
0.985769	8.262086823	0.013825	31.74289392	7.60E-05	68.31164366	2.00E-06
0.99225	9.076024616	0.009119	33.20912263	5.50E-05	65.56625313	1.00E-06
0.232398	1.999149579	0.015934	3.095013554	9.90E-05	7.189120851	0
0.27642	2.400738565	0.016778	4.105339096	0.000122	6.15705019	2.00E-06
0.501585	1.891573685	0.122743	2.162561803	0.038837	9.160576369	0
0.836887	-1.011653017	0.968806	-1.023843402	0.920008	-4.03171059	0
0.601064	-2.738613518	0.000838	-3.389120543	3.10E-05	-1.991853997	0.004916
0.329037	3.192119516	0.039706	6.126264501	0.000812	17.05908837	1.00E-06
0.156136	-1.019258153	0.965545	1.030642148	0.931868	3.970557016	2.00E-06
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0.609631	2.979152639	0.09643	4.799418392	0.008912	5.213283516	0.004412
0.217498	2.181676479	0.069975	3.82501398	0.001022	16.12095705	0
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0.933478	-1.46002803	0.157999	-1.49685283	0.0963	-4.29293757	0
0.927465	-1.404067722	0.207379	-1.532268914	0.073534	-4.060484995	0
0.959183	-1.522298097	0.090628	-1.497337435	0.076922	-4.378025976	0
0.552499	-2.103295617	0.038744	-3.03107769	0.001205	-2.535608925	0.003882
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0.357484	-1.578941812	0.130941	-3.510739938	4.80E-05	-6.947427523	0
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0.742425	2.311724634	0.01817	3.016670507	0.001053	6.111085537	1.00E-06
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0.641952	-20.54416798	0.003419	-26.41863298	0.000619	-18.93392679	0.001122
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0.665153	-21.32326699	0.003329	-26.30446415	0.00068	-20.77371909	0.000891

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0.152586	2.375055351	0.042074	2.223237455	0.041862	3.345668976	0.001694
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0.42015	-1.092835338	0.833667	-1.175414648	0.604878	-4.451249264	4.00E-06
0.979369	3.068465343	0.019177	3.247934752	0.007659	-1.085232023	0.873168
0.368128	2.483717951	0.023739	2.978082885	0.003685	5.566968944	1.40E-05
0.301559	2.467899277	0.238572	2.989943228	0.106311	4.568048341	0.01777
0.753269	-1.254241422	0.786066	-2.291202324	0.152456	-30.40673037	0
0.088226	2.800935227	0.005804	3.552968672	0.000363	2.595537507	0.003507
0.835594	1.111649601	0.952486	2.678810424	0.40312	4.431978083	0.153912
0.82976	1.089966962	0.962113	2.62406356	0.410465	4.393591782	0.153014
0.481342	-3.269815574	0.269879	-5.257563576	0.074635	-3.959654641	0.124658
0.598418	-1.954395935	0.090764	-2.696526449	0.006356	-8.76938041	0
0.794778	-3.409324158	0.004058	-6.122763413	3.50E-05	-9.198477599	1.00E-06
0.618463	9.636561577	0.0013	18.25998031	3.20E-05	29.55058002	1.00E-06
0.154041	-2.271609574	0.010738	-3.113384211	0.000281	-1.794043941	0.03797
0.5292	-2.036697618	0.047841	-2.78344153	0.002415	-2.522784425	0.003974
0.979616	1.976091277	0.387713	2.706419211	0.136544	3.303984413	0.056622
0.255652	-4.490219015	0.002372	-8.968567942	2.70E-05	-3.482502253	0.002787
0.4447	-5.525791498	0.003793	-10.53302819	8.50E-05	-4.416228637	0.00332
0.544571	-5.090885396	0.004101	-9.602436733	8.30E-05	-4.049606335	0.00402
0.25599	-4.837017515	0.001686	-9.316867392	2.10E-05	-3.985061231	0.001169
0.255652	-4.950667744	0.002497	-9.473327909	3.80E-05	-4.01653812	0.002049
0.636598	2.173343798	0.055174	3.213399204	0.002135	4.270378759	0.00013
0.165078	2.180437511	0.046903	3.584130991	0.000697	14.99836989	0
0.142038	2.154103023	0.040948	3.474696998	0.000583	13.05131901	0
0.190967	2.149689483	0.051014	3.663360414	0.000587	13.21833424	0
0.477591	1.140704788	0.94698	1.319042682	0.858373	-1.12314698	0.934492
0.460974	1.199807447	0.925328	1.354115641	0.843924	-1.096321442	0.948807
0.49863	1.104305549	0.962276	1.338670796	0.855882	-1.08149295	0.95743
0.470042	1.040687852	0.98416	1.195441427	0.910219	-1.019637421	0.989292
0.46783	1.017216393	0.993885	1.194162107	0.912532	1.01393925	0.992545
0.411291	1.420484454	0.119955	1.297631156	0.222914	-3.363202933	0
0.440229	1.291764308	0.295212	1.245913499	0.328668	-3.530191279	0
0.393117	1.379298415	0.200843	1.315951217	0.238399	-3.630430644	1.00E-06
0.434947	1.340884706	0.183561	1.275308104	0.236331	-3.284447523	0
0.490332	1.464968864	0.141761	1.298255848	0.29508	-3.589663203	1.00E-06
0.884981	-3.223235702	0.047808	-10.7539522	8.60E-05	-19.44453256	1.00E-06
0.187681	3.130248608	0.008227	3.715932965	0.001175	4.291600169	0.000231
0.19904	2.524683078	0.009641	2.928094847	0.001363	3.284403055	0.000287
0.597447	-2.384957212	0.010064	-4.146966604	4.70E-05	-8.10076375	0
0.28156	2.52630067	0.261989	1.02170196	0.983081	1.086228959	0.921725
0.436757	2.512576473	0.291892	4.318732773	0.050874	5.951506952	0.013094
0.386073	2.118934154	0.323307	3.646816265	0.044868	4.745210643	0.01199
0.428859	2.247403046	0.309696	3.687229784	0.055243	4.855555726	0.01538
0.382299	2.126261255	0.317897	3.614584015	0.045326	4.350753266	0.016931

0.394969	2.159237191	0.298167	3.612693051	0.042213	4.320403131	0.015923
0.8854	2.943158045	0.008059	3.47374055	0.001113	-1.103563072	0.815322
0.689169	3.572097589	0.001259	3.402862321	0.000532	4.267387698	3.70E-05
0.232347	2.160363877	0.034682	3.283820322	0.000703	8.047882429	0
0.281236	2.01551359	0.050461	3.088231847	0.000972	7.684797692	0
0.240336	-1.132004739	0.78475	-2.309412016	0.006617	-4.262485549	1.00E-05
0.228035	-1.230067777	0.596958	-2.40025749	0.003324	-4.407270063	4.00E-06
0.290605	-1.209845863	0.65265	-2.428210723	0.00453	-4.444906894	8.00E-06
0.267803	-1.18357426	0.696409	-2.396711534	0.005036	-4.503539759	7.00E-06
0.031067	-1.442042682	0.623619	-2.756034435	0.068659	-1.15269684	0.822929
0.037598	-1.532081139	0.556663	-2.939907727	0.053349	-1.303098115	0.661729
0.991998	3.843819148	0.399681	5.503384245	0.188955	6.623284707	0.174367
0.307426	-2.229653922	0.016957	-3.420739522	0.000208	-6.682153554	0
0.291791	-2.239313915	0.016807	-3.646338154	0.000129	-6.9149523	0
0.334314	-2.132355817	0.026145	-3.458769808	0.000227	-6.749660996	0
0.377311	-2.051647794	0.037044	-3.3357536	0.000348	-6.664184859	0
0.344205	-2.104725461	0.028229	-3.507605409	0.000197	-6.909210796	0
0.644939	7.152657108	0.002058	12.91516469	5.00E-05	19.65952234	2.00E-06
0.048558	2.516686533	0.004541	3.531654558	8.80E-05	4.351728163	4.00E-06
0.125551	1.291201254	0.377819	1.727792355	0.022813	2.373524661	0.000343
0.093593	1.821083317	0.01852	2.448105769	0.000311	3.855615087	1.00E-06
0.511062	2.044596248	0.101488	2.281588113	0.037886	1.022868672	0.961948
0.798815	-1.769877566	0.042337	-1.000648056	0.998559	2.505410271	0.000399
0.100765	-2.213823593	0.005864	-2.867906793	0.000175	-1.664655183	0.040893
0.48729	-3.278403476	0.003833	-3.632136266	0.000703	-2.681830649	0.005265
0.497525	-3.641428918	0.002398	-3.849205975	0.000565	-2.726298049	0.005501
0.171918	-2.75055485	0.020885	-3.770139712	0.001378	-2.778665825	0.008555
0.248165	-2.569598554	0.028265	-2.736876485	0.011244	-1.700288988	0.171137
0.727652	2.87479781	0.070604	3.295319639	0.025586	-1.068509894	0.916495
0.233644	-2.935485183	0.000784	-3.215204658	8.40E-05	-1.837215118	0.018207
0.197947	-2.913698222	0.000923	-3.248159682	8.90E-05	-1.870340786	0.016614
0.136902	-2.704884454	0.00257	-3.141040375	0.00023	-1.771738357	0.039833
0.327357	-1.128100056	0.914644	1.026602497	0.980115	-12.82188035	0.000241
0.741399	-1.289826966	0.883711	1.041640095	0.978336	-9.169374556	0.024574
0.429533	-1.405945608	0.782571	-1.04942927	0.963692	-12.00121091	0.000713
0.390205	-1.292506763	0.86672	1.027970575	0.984171	-8.431306945	0.017057
0.477458	-1.296209472	0.840127	1.001039125	0.99922	-10.62156774	0.001435
0.17364	3.675418508	0.002093	4.692575725	0.000127	6.903669354	2.00E-06
0.213803	-2.460642758	0.001775	-3.4250438	2.60E-05	-1.892668076	0.008078
0.292086	-2.597983543	0.001265	-3.13076115	6.00E-05	-1.890691348	0.009014
0.74497	-2.220067057	0.006211	-3.513949377	3.40E-05	-5.160709215	0
0.667621	-2.282512372	0.002902	-3.525660555	1.80E-05	-5.158099612	0
0.882261	-2.253639576	0.010898	-3.473522052	0.000102	-5.125474987	1.00E-06
0.712813	-2.33228905	0.005262	-3.802194383	2.70E-05	-5.724576514	0
0.690271	-2.236377989	0.003594	-3.404926479	2.30E-05	-5.132905407	0
0.982905	4.262711101	0.016149	18.92773936	1.50E-05	15.85951172	5.00E-06
0.956492	3.951584031	0.020215	18.01958953	1.50E-05	14.37754123	6.00E-06

0.941689	4.206981587	0.016409	18.00914456	1.60E-05	14.66196028	6.00E-06
0.934028	3.78003421	0.021351	17.27580902	1.40E-05	14.1439605	5.00E-06
0.924406	3.660897122	0.027163	16.88333058	1.70E-05	13.44801582	8.00E-06
0.069357	-2.265460944	0.007593	-2.483010852	0.001437	-2.383609876	0.001448
0.572002	-2.484059776	0.003927	-3.259126207	0.00012	-4.296421244	3.00E-06
0.387118	2.3471947	0.231131	2.503733531	0.151533	3.873744311	0.023278
0.538656	2.221879367	0.131027	2.527340604	0.052263	3.337248893	0.008688
0.1952	2.931419678	0.015533	5.292719319	0.000162	13.59135326	0
0.681064	3.641652127	0.009656	4.42264976	0.001473	9.055421012	7.00E-06
0.851913	1.503937885	0.531016	1.508062877	0.468408	-1.321750781	0.605953
0.944736	-4.654985802	3.10E-05	-5.241735152	4.00E-06	-2.672275503	0.000213
0.591678	-1.961240681	0.01026	-2.912944521	6.60E-05	-4.303909689	0
0.214466	3.658641922	0.515956	5.00516639	0.339056	3.115551294	0.484567
0.208066	3.674183426	0.530128	5.342654292	0.333937	3.39516434	0.463647
0.200807	3.823250535	0.507228	5.047831067	0.345492	3.510379825	0.443037
0.205158	3.879757639	0.516743	5.741254286	0.31945	3.45774336	0.464055
0.211606	3.859189778	0.526861	5.501880434	0.341185	3.063399073	0.543651
0.741341	3.287409692	0.048858	11.23471556	8.50E-05	17.96173479	3.00E-06
0.93896	2.476033815	0.003025	2.553695964	0.000833	-1.103333916	0.744685
0.281798	-1.404384013	0.309195	-2.425150824	0.002254	-8.743041841	0
0.578936	1.999132926	0.016403	2.137115012	0.004519	1.261262036	0.390091
0.516101	2.053018966	0.016707	2.142808167	0.006063	1.296293775	0.353533
0.608668	1.864345615	0.027651	2.004831244	0.007906	1.249368314	0.404372
0.499761	1.97101642	0.013685	2.034532762	0.005214	1.25084046	0.383825
0.124706	-2.610054327	0.003372	-3.101876271	0.000257	-1.67760068	0.063353
0.549755	3.583797775	0.001032	4.689470862	4.10E-05	5.427751939	3.00E-06
0.160486	3.009992759	0.010289	2.465142111	0.021046	9.993047564	0
0.804585	4.126853761	0.110757	2.482574936	0.28965	5.026324184	0.036654
0.704662	-2.398023186	0.007226	-1.422599545	0.25785	1.318775535	0.354512
0.3073	3.882941187	0.004289	5.208002582	0.000265	6.775319266	2.00E-05
0.304427	2.051874078	0.044724	3.115891656	0.000903	7.550791185	0
0.84926	-3.89031433	0.001656	-5.437787134	5.60E-05	-3.184549558	0.001551
0.868305	4.197863331	0.014155	4.858225139	0.003601	4.779133093	0.002734
0.886598	4.068657586	0.01348	4.561326087	0.003951	4.593119461	0.002651
0.968956	2.268806787	0.185446	2.831879409	0.058533	3.837141499	0.010807
0.852122	-1.812318379	0.053941	-2.334481252	0.003243	-4.801982513	1.00E-06
0.986118	1.100414829	0.78502	-1.14201143	0.635756	-4.919348529	0
0.12754	-2.14836313	0.029096	-3.71972164	0.000172	-4.648874489	1.00E-05
0.476379	1.606210226	0.116332	2.347690238	0.00221	7.420789986	0
0.972005	3.939126998	0.006085	8.021424908	4.70E-05	9.166289241	6.00E-06
0.85807	-2.685869804	0.0026	-4.018499185	3.10E-05	-2.961357981	2.00E-04
0.220228	3.093317103	0.008739	1.897518009	0.107549	5.200655841	4.90E-05
0.913033	-2.41878307	0.02517	-3.208623808	0.001748	-12.14096103	0
0.998898	-2.327400482	0.030228	-3.212552088	0.001576	-11.74104149	0
0.280497	-2.191356832	0.250608	-4.382478219	0.01252	-20.09529476	4.00E-06
0.298693	-2.4965207	0.223988	-5.096178797	0.013379	-24.6297681	7.00E-06
0.99736	-1.849157358	0.664963	-1.502869629	0.749625	-185.8950367	4.00E-06

0.936229	-2.534481044	0.573982	-2.430500759	0.537299	-501.5633087	6.00E-06
0.16236	2.71938239	0.020151	3.246798009	0.003361	2.134943381	0.045881

For Review Only

<i>CG_30_L</i> <i>ogFC</i>	<i>G_30_adj.</i> <i>P.Val</i>	<i>CH_31_L</i> <i>ogFC</i>	<i>H_31_adj.</i> <i>P.Val</i>	<i>CH_34_L</i> <i>ogFC</i>	<i>_34_adj.P.V</i> <i>al</i>	<i>CG_31_L</i> <i>ogFC</i>	<i>_31_adj.P.</i> <i>Val</i>	<i>CG_34_L</i> <i>ogFC</i>
-1.13013	0.788129	1.133764	0.99638	-1.25578	0.938763	2.609591	0.304195	4.973622
-1.17861	0.70689	1.117463	0.99638	-1.28968	0.928109	2.823668	0.299829	5.203235
-2.99006	0.035976	1.047543	0.997224	-1.59598	0.896861	-1.48339	0.785742	-5.65913
7.702582	1.00E-05	1.37124	0.99638	1.777771	0.777943	1.039194	0.983944	-1.45739
1.990406	0.058175	1.037884	0.997224	1.623703	0.802577	1.406296	0.715734	2.567425
1.883339	0.064541	1.014813	0.998916	1.56687	0.812487	1.382462	0.71185	2.319972
1.762192	0.103501	-1.04747	0.997224	1.598232	0.794624	1.475979	0.635379	2.552098
1.927508	0.070393	1.018666	0.998628	1.582946	0.821778	1.400578	0.717403	2.581914
1.818254	0.090624	-1.0021	0.999559	1.537533	0.830144	1.481392	0.639158	2.670739
-44.5459	0.001688	-4.50368	0.99638	-14.1003	0.521494	-3.45055	0.673931	-11.2043
-47.2971	0.001473	-4.57079	0.99638	-14.5921	0.515324	-3.38926	0.681652	-10.771
-48.3614	0.001539	-4.76245	0.99638	-14.4413	0.521668	-3.1576	0.708442	-9.23751
-46.4221	0.001648	-4.59751	0.99638	-14.6942	0.515324	-3.23569	0.700361	-9.06668
-47.8306	0.001587	-4.80245	0.99638	-13.4332	0.541071	-3.23269	0.70177	-10.4162
-1.57951	0.174355	-1.26408	0.99638	-1.17751	0.95397	-1.25827	0.805759	-3.23632
-1.53805	0.190786	-1.30536	0.99638	-1.20666	0.945308	-1.45598	0.619766	-3.21191
1.780138	0.811043	-1.37378	0.997102	2.649195	0.953029	1.999509	0.921841	-1.40501
1.99927	0.756943	-1.27737	0.997224	2.736583	0.94922	1.833558	0.931262	1.132804
1.939275	0.771217	-1.26811	0.997224	2.796363	0.948726	1.860626	0.929636	-1.08416
2.089124	0.711249	-1.28645	0.997224	2.589039	0.946242	1.549464	0.948015	-1.03124
2.893144	0.000905	-1.3887	0.99638	-1.26507	0.921253	1.09205	0.944726	1.764371
3.133482	0.000695	-1.33699	0.99638	-1.26525	0.927465	1.059922	0.96731	1.865212
2.781108	8.50E-05	1.364777	0.99638	1.269269	0.879419	1.344476	0.604563	1.768248
2.117955	0.022217	-1.00365	0.999559	1.118412	0.972744	1.905105	0.38758	3.057004
-1.36983	0.368903	1.042552	0.997224	1.11059	0.973771	-1.42856	0.648079	-2.88714
-1.33244	0.40397	-1.02622	0.997529	1.237035	0.932537	-1.4734	0.599467	-2.47159
4.504748	0.029376	-1.10577	0.997224	2.360858	0.826446	-1.20486	0.947534	-1.17589
-4.02394	8.00E-06	-1.14329	0.99638	-1.20653	0.930997	1.526126	0.489783	2.00894
-4.55394	1.70E-05	-1.15321	0.99638	-1.27557	0.917661	1.549383	0.540077	2.073731
-4.22999	1.00E-05	-1.16239	0.99638	-1.17707	0.948726	1.526761	0.513614	2.0234
3.471533	0.000125	1.091657	0.99638	-1.01263	0.998401	1.692683	0.44064	2.602297
-3.3259	0.010662	-1.57427	0.99638	-1.83962	0.818172	-1.67848	0.649205	-3.86092
-3.2184	0.009172	-1.48132	0.99638	-1.96437	0.746384	-1.67841	0.62736	-3.97141
1.504469	0.616176	1.295292	0.99638	2.854415	0.746384	2.048771	0.679658	3.28507
1.841076	0.028675	1.001413	0.999559	1.042593	0.988242	1.438353	0.572043	3.631394
-10.1686	0.020055	-1.41799	0.99638	2.524354	0.889341	2.830954	0.674396	21.71787
-9.86829	0.021167	-1.4009	0.99638	2.509305	0.88966	2.809793	0.676598	21.3374
-9.2153	0.019861	-1.46456	0.99638	2.201482	0.913313	2.607601	0.691307	18.45852
-8.68981	0.022989	-1.46819	0.99638	2.153541	0.914328	2.554801	0.699124	16.10248
-10.1389	0.018534	-1.48891	0.99638	2.309227	0.909025	2.747831	0.681652	20.31204
1.801204	0.013698	-1.03637	0.997224	-1.05784	0.98102	1.319879	0.625938	2.564911
1.830481	0.014625	1.02555	0.997224	-1.14025	0.95208	1.364543	0.591739	2.558061
3.387208	0.000859	1.205417	0.99638	1.447333	0.867901	1.917509	0.417095	3.324154

-3.61451	0.012682	-1.13943	0.99638	-1.87318	0.832444	-1.13904	0.952461	-4.24653
5.427769	0.001721	1.063987	0.997224	-1.00387	0.999969	2.127212	0.526342	4.718454
6.210532	0.001344	1.034842	0.998348	-1.02162	0.998443	2.298004	0.505511	5.263531
5.610318	0.000207	1.825515	0.99638	1.554322	0.873428	-1.07364	0.970234	-2.48528
2.279775	0.127105	1.911238	0.99638	1.668171	0.881284	-1.84903	0.626823	-3.5129
-4.8638	0.001345	-1.59979	0.99638	-1.57224	0.888476	-1.46801	0.770062	-2.09509
-4.62347	0.00069	-1.65578	0.99638	-1.55222	0.872552	-1.54399	0.695696	-2.30921
-4.46201	0.00096	-1.47913	0.99638	-1.61256	0.861792	-1.63481	0.64373	-2.53861
-4.3427	0.001218	-1.43177	0.99638	-1.58152	0.868991	-1.57348	0.684734	-2.56285
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-1.93823	0.084286	1.054411	0.997224	-1.22989	0.950417	-1.42272	0.720137	-4.53339
4.012436	0.000243	1.469265	0.99638	1.189036	0.956648	1.678069	0.523778	2.463276
3.874759	0.000265	1.302428	0.99638	1.302069	0.924688	1.65974	0.525179	2.460915
3.886723	0.000182	1.436746	0.99638	1.200313	0.951909	1.55554	0.577257	2.26134
3.754293	0.000154	1.435106	0.99638	1.193105	0.951481	1.473894	0.621528	2.040261
3.849472	0.000243	1.342386	0.99638	1.264321	0.932537	1.612471	0.546509	2.389859
3.089614	0.000803	-1.20761	0.99638	-1.53151	0.816005	-1.14787	0.904539	1.196995
2.889937	0.001084	-1.08537	0.99638	-1.29241	0.914168	-1.15551	0.894494	1.303802
2.347468	0.007194	-1.29009	0.99638	-1.108	0.973887	1.635597	0.487919	1.915973
1.361632	0.740285	-1.33184	0.99638	-1.02609	0.998894	1.098179	0.978007	-6.06213
12.26898	0.001079	1.487723	0.99638	1.044659	0.996438	1.568915	0.842168	3.132369
11.55547	0.001125	1.495658	0.99638	1.013153	0.999577	1.532835	0.849369	3.075889
-1.58037	0.294637	1.043451	0.997224	1.122893	0.976898	2.723954	0.324839	4.191513
2.874131	0.0029	1.021238	0.998526	1.056159	0.988241	2.129027	0.354631	5.164845
-1.2153	0.821504	-4.91385	0.99638	-1.81797	0.896861	-2.39741	0.569973	-2.20876
3.710343	0.000226	-1.09688	0.99638	-1.20192	0.950417	1.190545	0.873015	1.029705
1.036349	0.908253	1.029996	0.997224	1.053954	0.981603	1.123527	0.878116	6.277912
1.008592	0.980379	-1.00662	0.999107	1.029653	0.991159	1.156755	0.836611	8.300031
-1.0459	0.886945	-1.03832	0.997224	-1.02921	0.991159	1.24249	0.72197	8.23482
1.009294	0.977388	1.020311	0.997224	1.036112	0.988124	1.153978	0.82878	7.022119
1.100354	0.68452	1.04102	0.99638	1.038648	0.983771	1.026271	0.976666	4.457836
2.103313	0.750531	-1.22409	0.997224	2.549434	0.954393	2.048502	0.918219	-1.5246
-1.07382	0.938795	-4.76418	0.99638	-2.05236	0.864714	-2.82641	0.493083	-2.97708
1.429026	0.207841	1.232226	0.99638	1.75955	0.556282	1.274023	0.733455	5.193091
1.469096	0.169563	1.228223	0.99638	1.811433	0.533844	1.236585	0.774808	4.897721
2.05756	0.770144	-1.20035	0.997224	2.699552	0.953896	2.658496	0.880893	-1.08611
9.863587	1.00E-06	2.028145	0.99638	1.43825	0.889248	1.023454	0.990826	-3.18042
-6.35696	3.50E-05	-2.3926	0.99638	-2.56969	0.499325	-1.19808	0.898673	1.614447
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-1.42642	0.169552	-1.14083	0.99638	-1.25931	0.890682	-1.40318	0.551934	-3.04529
-1.12268	0.868657	1.098045	0.996452	-1.14959	0.977914	-1.31736	0.871309	-9.24149
-1.00145	0.996512	-1.21863	0.99638	-1.05234	0.981388	1.691906	0.330322	4.151247
3.948277	0.006821	-1.39766	0.99638	-1.27551	0.956541	1.988831	0.548491	4.946546
3.079408	0.338143	-1.37039	0.99638	2.632402	0.897646	1.974521	0.834041	3.472195
-3.17711	0.030433	-1.02184	0.998916	-1.45353	0.928191	-1.41507	0.825884	-5.63322
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1.841611	0.007473	1.207902	0.99638	1.086932	0.97175	1.468644	0.452873	3.467178
2.55474	0.094812	1.190546	0.99638	-3.18712	0.556282	1.188865	0.937553	-1.83686
2.619816	0.093984	1.09726	0.997224	-3.17488	0.565058	1.222701	0.926208	-1.86206
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2.589369	0.097189	1.148178	0.99638	-3.12731	0.574701	1.168739	0.946028	-1.90201
2.571913	0.098507	1.13031	0.99638	-3.27006	0.555618	1.205671	0.932123	-1.90522
2.476213	0.078484	1.159171	0.99638	-2.68137	0.598764	1.455737	0.795112	-1.78753
2.737769	0.056346	1.18426	0.99638	-2.48469	0.662156	1.433756	0.813059	-1.88432
-2.39182	0.60082	-1.28937	0.996392	1.14249	0.993795	-1.55732	0.938489	-1.42178
2.366776	0.003978	1.260951	0.99638	1.172996	0.951266	1.433597	0.605526	1.525282
2.067566	0.032027	-1.12303	0.99638	-2.94246	0.273531	1.575005	0.555824	1.604953
1.968805	0.044272	-1.17521	0.99638	-2.80376	0.304313	1.640205	0.512777	1.604716
2.057252	0.034777	-1.05498	0.997224	-2.90319	0.304313	1.537648	0.590203	1.639283
1.995047	0.036341	-1.09983	0.99638	-2.85279	0.273531	1.583643	0.53849	1.59036
2.077091	0.035141	-1.09799	0.99638	-2.94729	0.304313	1.568983	0.573886	1.671499
3.891375	0.000137	1.342336	0.99638	1.545802	0.816677	1.503677	0.605154	1.727919
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1.227189	0.730387	-3.22215	0.99638	-1.76234	0.844232	-2.08764	0.497107	-2.44248
1.243725	0.19588	1.026068	0.997224	1.157686	0.895538	1.437651	0.349222	3.111629
1.196756	0.356619	-1.05856	0.99638	1.214561	0.862711	1.464356	0.356827	3.205263
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1.112619	0.688898	-1.00847	0.998916	1.022403	0.993513	1.400049	0.497107	5.694572
1.154289	0.636942	-1.01369	0.998628	1.017593	0.995555	1.552192	0.443571	6.84375
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4.099666	4.70E-05	1.224194	0.99638	1.190577	0.950417	1.296899	0.762687	1.451295
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3.056657	0.23132	-1.47091	0.99638	1.604907	0.95208	2.093519	0.759287	3.61322
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1.796485	0.067699	1.032224	0.997224	-1.13403	0.968628	1.891082	0.380366	1.941067
1.752557	0.082011	1.01762	0.998526	-1.06555	0.983701	1.981342	0.35662	2.08986
1.049188	0.971719	1.754119	0.99638	-1.65528	0.951481	-2.16351	0.762172	-121.875
2.558893	0.005193	1.14293	0.99638	1.185125	0.953435	1.864885	0.406512	2.651346
2.365646	0.008861	1.115569	0.99638	1.186442	0.952901	1.924415	0.380591	2.642911
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4.995782	5.70E-05	-1.05307	0.997224	-1.35285	0.914168	1.262659	0.832138	-1.39081
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4.013111	0.000408	1.047735	0.997224	-1.03347	0.993834	1.560602	0.620092	3.496716
2.285723	0.442096	-1.35087	0.99638	1.952144	0.930586	1.180863	0.968099	1.124498
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-1.15271	0.58475	-1.0166	0.997621	-1.14482	0.943999	-1.69117	0.330322	-3.46717
1.083395	0.846866	-1.13513	0.99638	-1.06043	0.985084	-1.23527	0.819063	-5.06936
-2.1717	0.024282	1.00015	0.999979	1.3763	0.889452	2.164376	0.347771	2.316104
1.286501	0.300464	-1.00089	0.999559	1.146669	0.944809	-1.08777	0.922221	-4.1901
1.338092	0.253703	1.001778	0.999559	1.210579	0.917476	-1.08246	0.933891	-4.37632
-4.02042	1.00E-06	-1.54473	0.99638	-1.21113	0.914168	1.113184	0.895174	2.1813
-7.257	0.00013	-1.38959	0.99638	-1.41432	0.928109	-2.7221	0.366278	-2.00827
-16.9686	0.007014	-2.5413	0.99638	-1.23251	0.983093	1.644257	0.749501	6.666168
-2.91637	0.141004	-1.14087	0.99638	1.772473	0.914823	-1.26047	0.933961	4.284159
-1.89809	0.051269	-1.16333	0.99638	-1.21059	0.946238	-2.01014	0.35662	-4.68783
-3.3096	0.008197	-1.50886	0.99638	-1.78381	0.821778	-1.63506	0.655003	-3.56471
-3.03891	0.009008	-1.48817	0.99638	-1.80746	0.786515	-1.70329	0.591739	-3.44934
4.506939	0.000214	1.337428	0.99638	-1.03476	0.993795	1.411257	0.732138	1.843143
4.380894	0.000378	1.307152	0.99638	-1.02251	0.996719	1.50667	0.680893	1.883507
4.346025	0.000216	1.338355	0.99638	-1.03177	0.994533	1.440125	0.704458	1.826118
4.351017	0.000311	1.303608	0.99638	-1.01315	0.999295	1.508383	0.669302	1.916834
4.421438	0.000377	1.304496	0.99638	1.01509	0.998717	1.467378	0.708442	1.878321
4.046563	0.021148	-1.42409	0.99638	-1.36464	0.953089	1.323619	0.892799	-1.21275
4.213936	0.0197	-1.36178	0.99638	-1.43167	0.946242	1.288016	0.908702	-1.23777
4.016028	0.02292	-1.40688	0.99638	-1.37287	0.953029	1.341047	0.886909	-1.24031
4.225417	0.020064	-1.3724	0.99638	-1.42269	0.948159	1.288252	0.909387	-1.28313
4.023683	0.021923	-1.46542	0.99638	-1.34557	0.95505	1.285915	0.90758	-1.22372
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6.226585	0.001768	1.526552	0.99638	1.136057	0.981756	1.037159	0.990706	1.42022
1.45189	0.067487	1.018023	0.997224	1.141813	0.934766	1.618689	0.330322	3.206258
2.835896	0.069882	2.921202	0.99638	2.788159	0.642611	2.466102	0.481737	2.836604
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-2.20635	0.00417	-1.18096	0.99638	-1.19939	0.932798	-1.54263	0.48022	-2.17756
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3.074634	0.00823	-1.14414	0.99638	-1.23245	0.954393	1.165439	0.9239	-1.1362
2.833415	0.013145	-1.29481	0.99638	-1.19241	0.964939	1.199184	0.901598	-1.08657
2.908243	0.011155	-1.22871	0.99638	-1.17791	0.96922	1.143227	0.935454	-1.10458
10.4191	0.098507	-2.40327	0.99638	10.82978	0.704776	1.046669	0.995401	-1.20631
3.764537	0.000104	1.470947	0.99638	1.208728	0.944844	1.478559	0.603081	2.153013
3.590841	0.000224	1.459111	0.99638	1.193321	0.951266	1.524678	0.580082	2.162765
3.487053	0.000223	1.394688	0.99638	1.180633	0.953029	1.49519	0.592723	2.064258
3.315257	0.000288	1.313793	0.99638	1.220224	0.939699	1.570774	0.525179	2.110793

3.470465	0.000291	1.329701	0.99638	1.22265	0.942367	1.592793	0.528175	2.172583
-5.32566	0.000275	-1.33546	0.99638	-1.34618	0.932537	-2.7023	0.342664	-2.4421
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-2.09815	0.0096	-1.15548	0.99638	-1.16286	0.952307	-1.40198	0.619183	-2.34397
4.612815	0.001573	-1.22335	0.99638	-1.32992	0.944655	1.766628	0.611324	3.705531
-3.23283	0.030895	1.00292	0.999559	-1.51859	0.918069	-1.39371	0.83921	-5.30551
-4.5483	0.000181	-1.55435	0.99638	-1.48634	0.868991	-2.62456	0.317171	-2.51978
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1.230935	0.224099	1.005205	0.999107	1.176737	0.876325	1.455908	0.340599	3.190446
-5.64119	2.00E-06	-1.10137	0.99638	-1.20129	0.944844	1.234374	0.813874	-1.20584
-5.72284	2.00E-06	-1.12813	0.99638	-1.26377	0.917659	1.209689	0.832128	-1.18106
-6.34902	3.00E-06	-1.14712	0.99638	-1.34019	0.90016	1.211461	0.851176	-1.22575
-4.96501	1.00E-05	-1.04677	0.997224	-1.27536	0.919113	1.069538	0.960608	-1.31193
-5.83335	2.00E-06	-1.11267	0.99638	-1.27558	0.916061	1.238479	0.806058	-1.20501
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-3.63948	0.013866	-1.12611	0.99638	-1.56027	0.909025	-1.31948	0.869375	-5.28515
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1.284938	0.399486	1.240911	0.99638	-1.02762	0.993513	1.537519	0.479778	2.908588
2.274759	0.007277	1.183883	0.99638	1.352233	0.877377	1.444863	0.608658	2.860067
1.186875	0.91859	-2.09573	0.99638	-1.21466	0.988697	4.301392	0.681044	2.752039
1.105523	0.959025	1.518494	0.99638	1.183631	0.991159	4.833753	0.776281	2.90481
2.738739	0.553927	4.824402	0.99638	1.822564	0.969837	4.827911	0.668577	2.58736
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1.12027	0.952203	1.012529	0.999559	1.638705	0.969837	4.535421	0.782874	2.605599
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5.362907	1.70E-05	1.229724	0.99638	1.105884	0.976397	1.467678	0.651719	2.346841
4.788019	4.10E-05	1.134111	0.99638	1.055125	0.988242	1.611453	0.547317	2.6226
5.431624	3.10E-05	1.256369	0.99638	1.149503	0.970233	1.621152	0.570604	2.607791
6.219702	0.050202	6.243214	0.99638	16.00455	0.320413	2.254684	0.738979	2.694378
6.52374	0.063545	6.749622	0.99638	19.36618	0.338964	2.46561	0.730048	3.170039
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6.214528	7.00E-06	1.310693	0.99638	1.106811	0.976415	1.603841	0.563142	2.272089
5.896357	1.80E-05	1.298022	0.99638	1.129878	0.973399	1.675711	0.540055	2.383315
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4.608904	0.025969	-1.09488	0.997224	2.434189	0.818734	-1.18812	0.952572	-1.15857
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4.623234	0.003686	1.023682	0.998916	-1.07685	0.989305	2.759366	0.391755	5.890718
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3.682498	0.015983	-1.0557	0.997224	-1.07048	0.991091	1.545917	0.766605	3.731877
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2.46419	0.001554	1.022379	0.997621	1.217887	0.928109	1.588208	0.460635	3.257778
2.681578	0.004865	1.2247	0.99638	1.244457	0.939851	1.682318	0.504964	2.394054
2.2845	0.000774	1.375062	0.99638	1.407162	0.769641	1.337774	0.604563	2.638343
2.06455	0.011853	-1.01201	0.998916	1.083363	0.977295	1.450164	0.576622	2.337977
1.932594	0.030924	-1.05749	0.99638	1.166466	0.953695	1.579797	0.503286	2.603937
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2.198297	0.00807	1.031605	0.997224	1.199671	0.942367	1.433095	0.605526	2.337418
2.084529	0.015896	-1.02266	0.997621	1.140825	0.963977	1.542455	0.527237	2.665244
2.357782	0.001309	1.051472	0.99638	1.027495	0.992841	1.952626	0.306443	2.964384
2.076032	0.006122	-1.02294	0.997268	1.024928	0.993795	1.982196	0.304531	2.861686
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2.39047	0.001734	1.038996	0.997224	1.070141	0.98064	1.875397	0.340599	2.977681
1.687202	0.005002	1.004576	0.999301	1.272079	0.816677	1.354581	0.46426	3.071062
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1.122071	0.87183	-1.01079	0.999492	-1.72115	0.872552	1.602397	0.738679	2.315769
1.098177	0.878834	-1.00549	0.999559	-1.8019	0.821778	1.565895	0.703679	2.082203
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4.65339	0.411478	-1.01062	0.999559	4.666632	0.893554	1.070136	0.992258	-2.03792
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1.876742	0.025852	1.129794	0.99638	1.231153	0.926738	1.785856	0.368393	2.736036
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1.497763	0.069939	-1.09884	0.99638	1.072057	0.975573	1.44357	0.460635	3.136564
1.549482	0.036452	-1.05565	0.99638	1.09165	0.964939	1.38305	0.489446	3.157115
1.420902	0.105037	-1.09995	0.99638	1.053991	0.98064	1.512613	0.391755	3.202991
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1.831967	0.019837	1.262683	0.99638	1.089865	0.973013	1.648722	0.392654	3.628972
1.861372	0.007115	1.251335	0.99638	1.080201	0.97284	1.417692	0.498009	2.779678
4.354772	0.36393	-2.61159	0.99638	4.287298	0.888023	-1.01547	0.998568	-1.47691
1.925668	0.107922	2.173592	0.99638	2.484486	0.506636	2.301393	0.36392	2.688868
1.675359	0.122389	1.837093	0.99638	2.02764	0.54516	1.885451	0.391756	2.019055
1.98879	0.088217	2.232652	0.99638	2.58352	0.47644	2.271146	0.367356	2.513289
1.697956	0.078665	1.771542	0.99638	1.99435	0.499325	1.831242	0.375596	1.851176
1.720969	0.075921	1.735137	0.99638	1.879003	0.556282	1.628879	0.47473	1.97972
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-4.19049	0.000184	-1.29866	0.99638	-1.06678	0.986592	-1.40755	0.714884	-2.27069
-6.34027	2.00E-06	-1.54722	0.99638	-1.16098	0.957968	-1.19837	0.856141	1.319432
-4.34636	1.00E-06	-1.34637	0.99638	-1.10905	0.964951	-1.1592	0.84498	1.318839
3.000776	0.000172	1.080818	0.99638	-1.03804	0.990103	1.25566	0.760298	3.149663
7.865652	1.20E-05	1.924051	0.99638	1.215017	0.957968	1.464594	0.724929	3.141706
2.271714	0.002823	1.14599	0.99638	1.239957	0.917137	1.480817	0.52216	2.716983
2.188919	0.00643	1.038016	0.997224	1.234465	0.926738	1.451303	0.572752	2.760155
2.129774	0.014645	-1.16045	0.99638	1.174247	0.953029	1.541872	0.537396	3.715886
2.15659	0.013296	-1.13569	0.99638	1.126184	0.969837	1.524579	0.549211	3.516295
2.290536	0.011078	-1.12748	0.99638	1.122103	0.972744	1.497124	0.597832	3.774366
2.204211	0.012267	-1.12998	0.99638	1.089279	0.977699	1.460259	0.611056	3.560914
2.296322	0.01042	-1.12703	0.99638	1.227748	0.939136	1.570687	0.538013	4.056161
2.278803	0.000739	1.0579	0.99638	1.272165	0.871841	1.309885	0.632613	1.97239
3.344181	5.60E-05	-1.05627	0.99638	-1.25444	0.902733	1.3671	0.633852	1.40626
3.679804	9.00E-06	-1.05472	0.99638	-1.24132	0.911275	1.313671	0.669409	1.385496
3.598713	1.10E-05	-1.13017	0.99638	-1.26471	0.892791	1.212376	0.789545	1.242317
2.94758	1.20E-05	-1.10909	0.99638	-1.23665	0.881284	1.139961	0.844925	1.220227
4.196455	0.000441	1.418654	0.99638	1.384296	0.912929	2.068762	0.410063	3.577683
4.686079	0.000444	1.494232	0.99638	1.329357	0.932537	2.246669	0.393953	4.096327
-1.27301	0.194771	-1.09609	0.99638	1.049681	0.977699	1.224378	0.638595	4.109623
1.085023	0.829573	-1.09673	0.99638	2.250557	0.3816	1.364793	0.66399	2.628008
-1.19116	0.629562	-1.16993	0.99638	1.030238	0.993795	-1.59335	0.49842	-3.10802
-1.17065	0.711803	-1.06026	0.997224	1.045708	0.990771	-1.65575	0.523486	-3.32497
1.748075	0.114754	1.17875	0.99638	1.009773	0.99934	-1.02618	0.98884	-10.5704
1.692293	0.337227	1.142717	0.99638	-3.02334	0.538367	1.318405	0.863441	-4.40687
1.693385	0.325289	1.146629	0.99638	-3.13825	0.502912	1.284412	0.878919	-4.55554
1.668354	0.333841	1.175067	0.99638	-3.14875	0.497195	1.247983	0.896754	-4.56319
1.677216	0.3378	1.162793	0.99638	-3.11981	0.506636	1.331588	0.854156	-4.39495
1.673366	0.34503	1.15768	0.99638	-3.22021	0.499325	1.358411	0.840595	-4.43294

-1.89374	0.000989	-1.04267	0.99638	-1.043	0.981756	-1.82898	0.262046	-1.78241
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-3.78087	8.00E-05	-1.57032	0.99638	-1.26706	0.92117	-1.85199	0.386524	-1.95333
-1.54664	0.261036	-1.09548	0.99638	-1.36616	0.909025	-1.54303	0.592723	-8.47106
-1.43796	0.319889	-1.07242	0.99638	-1.26593	0.930171	-1.42611	0.648802	-6.99441
5.458788	2.10E-05	1.220437	0.99638	1.181481	0.957968	-1.12819	0.931262	-1.07691
2.395481	0.001362	1.270984	0.99638	1.052066	0.984239	1.230624	0.776334	2.2748
3.221666	0.000888	1.106239	0.99638	1.023293	0.995653	1.332838	0.752958	2.884665
3.348321	0.000204	1.173399	0.99638	1.024773	0.994681	1.164151	0.882405	2.476457
-4.74216	2.00E-06	-1.4323	0.99638	-1.05815	0.982762	-1.11991	0.908161	1.494189
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4.398982	6.90E-05	1.294056	0.99638	1.240768	0.940931	1.621426	0.536536	3.279442
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4.67476	0.005335	1.712635	0.99638	-1.24531	0.967646	1.566655	0.762728	2.464509
4.566806	0.006847	1.605415	0.99638	-1.25553	0.966248	1.574797	0.763653	2.484225
4.532039	0.006249	1.614659	0.99638	-1.16078	0.977699	1.6054	0.745154	2.642208
4.319181	0.007275	1.656532	0.99638	-1.26876	0.96296	1.56306	0.760868	2.633772
2.424988	0.007155	1.050083	0.997224	-1.48635	0.83569	-1.43475	0.649776	-7.01718
2.103753	0.028694	-1.05284	0.997224	-1.53152	0.824056	-1.34682	0.737811	-6.2803
2.143494	0.021411	-1.04209	0.997224	-1.52225	0.821778	-1.28702	0.782876	-6.25851
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1.300463	0.434022	1.016608	0.998527	-1.44992	0.830144	1.859057	0.36966	4.187047
2.171631	0.581044	-1.01933	0.999559	2.264099	0.932537	1.049487	0.995023	-1.45793
-1.39345	0.11011	-1.03878	0.99638	-1.10741	0.954195	-1.33155	0.536564	-2.77317
3.638947	4.80E-05	1.101625	0.99638	1.150156	0.95702	1.508325	0.534711	1.418689
2.100091	0.079419	1.935674	0.99638	2.641732	0.499325	1.944823	0.479264	2.39058
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1.768727	0.15491	1.1732	0.99638	1.701121	0.795403	1.570569	0.627638	2.150383
1.79609	0.16511	1.175153	0.99638	1.748496	0.795403	1.614377	0.625188	2.264024
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1.646581	0.222685	-1.00443	0.999559	1.141951	0.972744	1.34982	0.780895	3.577923
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1.776784	0.151628	1.032052	0.997621	1.223671	0.953089	1.262315	0.844692	3.414023
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1.624883	0.238913	-1.01297	0.999103	1.224114	0.953089	1.414805	0.735466	3.652401
2.527957	0.209611	-1.18079	0.99638	1.665246	0.928109	1.160027	0.960854	-1.62149

-1.18896	0.672482	1.007165	0.999492	-1.248	0.934928	-1.18157	0.856314	-8.37925
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9.340614	0.000924	1.944239	0.99638	1.569148	0.930997	2.194819	0.612187	5.608761
9.49963	0.00123	2.349256	0.99638	1.660346	0.925034	2.310334	0.601544	5.878889
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8.639528	0.001402	1.961309	0.99638	1.599706	0.928109	2.323799	0.582913	5.925604
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2.374051	0.00157	1.080642	0.99638	1.106429	0.970233	1.677723	0.392103	2.161216
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1.016072	0.96846	-1.07655	0.99638	-1.22355	0.927445	-1.28753	0.726018	-5.90606
4.858222	1.20E-05	1.58655	0.99638	1.554211	0.794405	1.221387	0.835277	1.481254
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8.158171	7.10E-05	-1.00539	0.999559	-2.39564	0.645242	1.282609	0.87616	-1.7249
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3.712211	7.00E-06	1.299993	0.99638	1.491244	0.737741	1.310292	0.669261	1.63549
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1.495022	0.180439	1.213584	0.99638	-1.14696	0.95702	-1.3026	0.725684	-7.20875
1.641346	0.099842	1.282829	0.99638	-1.19602	0.944509	-1.43154	0.608375	-7.78028
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1.468777	0.206788	1.225515	0.99638	-1.1612	0.953434	-1.26486	0.767733	-7.13518
1.631057	0.10593	1.328988	0.99638	-1.17885	0.950383	-1.3108	0.726246	-7.47755
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4.126222	0.071754	1.477821	0.99638	-3.54828	0.718583	-2.23516	0.681092	-38.8651
3.986308	0.075264	1.472657	0.99638	-3.52408	0.71321	-2.08146	0.712045	-36.7123
4.03331	0.072931	1.477366	0.99638	-3.60547	0.700418	-2.16071	0.694556	-37.7755
3.974243	0.075515	1.46078	0.99638	-3.59644	0.700418	-2.07887	0.712243	-37.0988
3.880659	0.081642	1.444918	0.99638	-3.46676	0.718835	-2.0549	0.718076	-36.2515
19.47222	0.000594	2.745442	0.99638	3.178196	0.788719	-1.02273	0.996834	-1.10148
-4.91352	0.000566	1.169768	0.99638	1.378215	0.928109	-1.24311	0.883845	6.260887
-11.1189	7.00E-06	-2.06831	0.99638	-1.25366	0.955745	-1.29649	0.858557	1.222636
-10.4085	8.00E-06	-2.05637	0.99638	-1.18212	0.971974	-1.35056	0.825905	1.211659
-10.0882	5.00E-06	-2.02073	0.99638	-1.17604	0.97081	-1.27485	0.859805	1.243579
-10.9052	8.00E-06	-2.03976	0.99638	-1.2422	0.957968	-1.30047	0.857368	1.227
-10.3017	7.00E-06	-1.98356	0.99638	-1.15353	0.975573	-1.34538	0.823922	1.205541
1.718992	0.040009	1.003607	0.999559	1.123867	0.9627	1.420069	0.562371	2.924721
-4.5296	3.00E-06	-1.37193	0.99638	-1.00808	0.999303	-1.15068	0.8733	1.395186

2.700822	0.000756	1.113969	0.99638	1.036223	0.991159	1.29556	0.727082	1.803054
1.558971	0.108672	-1.23994	0.99638	-1.04584	0.987463	1.265711	0.743612	2.449686
1.651847	0.06781	-1.16003	0.99638	-1.11967	0.965516	1.224678	0.791704	2.408465
1.646652	0.068575	-1.16878	0.99638	-1.10494	0.97175	1.263179	0.746422	2.431266
-1.54986	0.170491	1.025605	0.997621	1.127516	0.969837	-1.20511	0.842644	-3.11572
1.062126	0.933864	-1.26187	0.99638	1.44859	0.929925	1.501067	0.782227	9.996913
1.070114	0.923482	-1.19162	0.99638	1.522441	0.914168	1.458221	0.798919	8.711187
4.334646	0.000594	1.17944	0.99638	1.33468	0.928191	1.641515	0.610248	4.247587
1.979979	0.005561	-1.4363	0.99638	-1.42943	0.761493	-1.27096	0.701664	-4.50501
2.037016	0.004124	-1.33871	0.99638	-1.62372	0.581179	-1.25017	0.725884	-4.75434
2.066078	0.010478	1.018417	0.998178	1.154889	0.953435	1.080463	0.946349	1.999401
2.101386	0.008886	1.018757	0.997987	1.140871	0.957968	1.044816	0.97134	1.966103
1.009247	0.985062	1.134616	0.99638	-1.26133	0.932537	2.590739	0.304195	3.808372
1.112732	0.809237	1.350893	0.99638	-1.37816	0.888741	2.319802	0.324374	3.294377
-1.73838	0.040855	-1.05959	0.99638	-1.07557	0.977699	-1.55498	0.465232	-3.58871
2.552401	0.000178	1.136051	0.99638	1.034125	0.989215	1.257399	0.703967	1.984907
2.373117	0.000309	1.087382	0.99638	1.013671	0.996416	1.228842	0.729319	1.806567
2.220677	0.001801	1.159297	0.99638	1.310124	0.862924	1.647292	0.381104	2.500297
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2.471454	0.007405	1.287973	0.99638	1.161669	0.961974	1.627089	0.52216	4.96311
2.045703	0.024395	1.170696	0.99638	1.137004	0.966895	1.404505	0.663822	6.566569
2.172505	0.014856	1.215897	0.99638	1.125449	0.97081	1.344315	0.719807	5.603493
3.196691	0.001134	1.529383	0.99638	1.483324	0.852856	1.953839	0.392654	3.250525
2.667287	0.000123	1.11946	0.99638	1.088708	0.972744	1.375648	0.561683	1.903021
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1.837117	0.684402	-1.30098	0.99638	2.013741	0.948726	1.153343	0.980334	-1.21433
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5.168446	0.00028	2.260983	0.99638	1.679891	0.836864	1.256445	0.868997	1.419188
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2.108073	0.038849	1.207016	0.99638	1.207249	0.952901	1.790555	0.472012	3.482631
2.880689	0.087397	2.495745	0.99638	3.542813	0.556282	4.143155	0.338483	12.66548
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5.30157	0.000654	1.451505	0.99638	1.578746	0.881284	1.332258	0.840595	1.615853
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3.418099	0.619078	-1.82723	0.99638	2.965779	0.96388	1.191337	0.989021	-2.02026
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3.627853	0.057948	-1.10285	0.997224	-1.05159	0.995173	2.490578	0.553462	6.891884
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4.616519	0.011912	-1.31548	0.99638	-1.33431	0.95702	1.244936	0.924342	-1.21486
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4.661337	0.010763	-1.36153	0.99638	-1.32962	0.95702	1.21029	0.936036	-1.25291
4.571536	0.012013	-1.31136	0.99638	-1.41359	0.947822	1.26374	0.915994	-1.21164
4.393829	0.013218	-1.30899	0.99638	-1.38821	0.950417	1.214904	0.933891	-1.26069
1.545324	0.696859	-1.50659	0.99638	1.473274	0.964939	1.009673	0.999081	-1.02687
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4.982572	0.289005	2.217901	0.99638	5.259943	0.837637	1.075584	0.989033	1.017211
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-12.2155	4.60E-05	-2.29858	0.99638	-1.94644	0.841178	-2.04413	0.586704	-3.40336
-12.7446	6.80E-05	-2.46461	0.99638	-2.08439	0.827379	-2.1005	0.592376	-3.3415
-11.2253	0.000127	-2.24116	0.99638	-2.03549	0.837562	-2.44054	0.500751	-3.936
-7.36773	1.00E-05	-1.89947	0.99638	-1.24972	0.94922	-1.33964	0.794815	1.057946
-7.40991	9.00E-06	-1.9233	0.99638	-1.21115	0.956658	-1.31626	0.812152	1.085808
-7.4592	1.20E-05	-1.84089	0.99638	-1.21158	0.957063	-1.30371	0.825864	1.096704
-6.95912	1.60E-05	-1.77602	0.99638	-1.27336	0.944809	-1.38633	0.764124	-1.00593
-7.30885	1.20E-05	-1.84737	0.99638	-1.19254	0.96296	-1.30789	0.819544	1.077588
2.083595	0.074813	1.345459	0.99638	1.589785	0.852749	1.701384	0.573659	4.781216
-1.35076	0.176107	1.014923	0.997621	1.333742	0.802577	1.481819	0.417358	4.198356
4.260944	9.00E-06	1.139742	0.99638	1.185963	0.944936	1.416806	0.606909	1.20824
4.445408	5.00E-06	1.261897	0.99638	1.13349	0.962786	1.265552	0.758175	1.192774
-6.45991	1.00E-06	-1.69983	0.99638	-1.08142	0.977914	-1.15751	0.882336	1.764067
-6.29104	1.00E-06	-1.62463	0.99638	-1.08213	0.977914	-1.14514	0.895239	1.733697
1.546771	0.133961	1.131597	0.99638	1.074992	0.979794	1.567834	0.481834	3.368099
3.598598	0.001463	-1.27879	0.99638	-1.51329	0.866908	-1.33003	0.800022	3.474071
4.555872	0.002056	-1.48617	0.99638	-1.56444	0.889831	-1.72141	0.639943	2.814243
6.273813	0.00201	-1.08443	0.997224	-1.00346	0.999969	-2.05637	0.60066	-2.41974
-3.01071	0.071868	1.033691	0.998526	-1.39082	0.950468	-2.09647	0.605328	-4.15831
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2.600018	0.000608	1.104781	0.99638	1.060793	0.982737	1.258383	0.746911	3.276539
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1.938585	0.001078	1.138779	0.99638	-1.05083	0.98007	1.504294	0.364554	2.247886
1.912332	0.003102	1.093516	0.99638	-1.12551	0.950417	1.04131	0.965801	-4.21694
2.356722	0.000452	1.18239	0.99638	-1.15096	0.944809	1.003139	0.998424	-5.31994
-4.06352	7.00E-06	-1.50562	0.99638	-1.00253	0.999969	-1.13405	0.892799	1.217321
-1.71407	0.403683	-1.49833	0.99638	-1.35474	0.953089	1.069214	0.980498	1.761588
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4.107937	0.003688	1.238208	0.99638	1.068075	0.990082	1.799115	0.605154	3.304276
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-1.55196	0.400293	1.283513	0.99638	-1.24483	0.959176	1.020461	0.993581	-2.57773
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4.067661	3.20E-05	1.861134	0.99638	1.240338	0.928109	1.117315	0.921965	1.226391
1.667018	0.013297	1.039646	0.99638	1.151309	0.931743	1.251382	0.656526	2.389991
1.865918	0.00605	1.091621	0.99638	1.204588	0.914168	1.19461	0.772633	2.797977
1.767136	0.007646	1.058794	0.99638	1.198307	0.909025	1.736906	0.304531	2.854972
3.63472	0.473579	-3.78405	0.99638	3.602639	0.892445	1.026599	0.998091	1.005295
3.182565	0.035501	-1.41135	0.99638	-1.33118	0.952907	1.111628	0.964457	-1.35199
2.189073	0.672875	-3.93072	0.99638	2.063463	0.957304	1.06134	0.994499	-1.13715
2.160296	0.006379	1.039052	0.997224	1.108186	0.971812	1.404275	0.607979	2.044871

2.446053	0.005936	1.090423	0.99638	1.12547	0.971812	1.547221	0.552175	2.592201
-1.25254	0.466663	-1.03776	0.997224	-1.24196	0.917476	-1.91463	0.323412	-7.47797
-1.56464	0.038992	-1.19341	0.99638	-1.15048	0.935589	-1.20313	0.747783	-2.36492
-7.47906	1.40E-05	-1.80227	0.99638	-1.15084	0.972744	-1.16462	0.921841	1.637927
-6.35026	1.80E-05	-1.65607	0.99638	-1.08281	0.982762	-1.23804	0.860477	1.487529
2.267195	0.02334	1.55666	0.99638	1.286143	0.92992	2.030078	0.38758	4.484023
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1.231267	0.350861	-1.22484	0.99638	-1.0222	0.992517	1.801174	0.304195	3.658985
1.197994	0.390052	-1.25683	0.99638	-1.00953	0.997295	1.768253	0.262046	3.616715
1.221949	0.410742	1.331822	0.99638	1.078944	0.972744	1.463388	0.442823	2.911376
1.164884	0.589302	1.349649	0.99638	1.044615	0.986307	1.562976	0.414738	3.520801
2.062353	0.014641	-1.07202	0.99638	-1.30257	0.897153	1.214574	0.823152	1.919756
1.979477	0.022403	-1.12103	0.99638	-1.22655	0.931689	1.193538	0.845692	1.981081
2.079247	0.009374	-1.04635	0.997224	-1.262	0.913313	1.142251	0.888524	1.740777
1.958657	0.022818	-1.13854	0.99638	-1.2253	0.930649	1.235582	0.801971	1.830054
1.961666	0.019466	-1.09878	0.99638	-1.27224	0.911487	1.189551	0.84253	1.845996
1.225892	0.531326	1.045903	0.997224	1.135301	0.961974	1.087398	0.94149	2.505382
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2.860467	0.013546	-1.23058	0.99638	-1.05221	0.991259	1.558929	0.674396	3.74589
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1.345671	0.438364	1.256273	0.99638	1.045187	0.990771	1.059614	0.968953	-13.5773
1.280759	0.50814	1.322044	0.99638	-1.02076	0.996347	1.064978	0.964768	-12.4425
2.832989	0.001728	-1.04342	0.997224	-1.04385	0.990728	1.222419	0.837047	1.54011
6.755078	0.254525	1.746297	0.99638	7.256267	0.870606	-1.03258	0.996068	-1.14652
1.113785	0.881021	1.655498	0.99638	-2.35684	0.722325	1.604466	0.737822	1.029464
2.887061	0.000817	-1.228	0.99638	1.082318	0.9794	1.250373	0.798919	1.271969
2.327198	0.013123	1.06845	0.99638	1.499304	0.840424	1.667869	0.501271	3.347327
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6.580826	9.50E-05	2.289891	0.99638	2.168523	0.667255	1.65127	0.644333	2.010989
1.301306	0.669961	1.111252	0.99638	-1.05867	0.99233	1.191867	0.930474	2.070917
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1.29927	0.675679	1.158758	0.99638	-1.01131	0.999353	1.218345	0.918575	2.167494
1.278477	0.695795	1.156732	0.99638	-1.10731	0.983771	1.201127	0.926438	2.155677
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1.881907	0.030731	1.342944	0.99638	1.095365	0.975893	1.595034	0.476735	2.923757
3.253557	1.00E-04	1.254174	0.99638	1.336973	0.870606	1.596096	0.46213	1.950667
3.37329	0.000146	1.322998	0.99638	1.402468	0.852867	1.58836	0.494681	1.571743
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1.347779	0.276568	-1.14244	0.99638	1.056467	0.982762	1.28678	0.703279	2.86703
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1.018432	0.963224	-1.0712	0.99638	-1.5306	0.743438	-1.31127	0.703005	-6.73453
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3.142641	0.003913	1.017035	0.998916	1.256978	0.946242	1.240806	0.861216	1.451413
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4.480924	4.90E-05	1.327448	0.99638	1.054646	0.988241	1.292216	0.785912	2.262942
4.03008	7.40E-05	1.68723	0.99638	1.462909	0.845221	1.832392	0.410063	2.61963
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3.381028	0.00145	-1.24587	0.99638	-2.1273	0.573243	1.094226	0.954907	1.755883
4.912841	1.00E-06	1.387718	0.99638	1.365137	0.836864	1.065085	0.95391	-1.59904
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2.833739	0.000824	1.199108	0.99638	1.041728	0.990082	1.576069	0.500751	2.050474
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2.529075	0.006389	-1.1092	0.99638	-1.05988	0.987463	1.654031	0.508985	2.845716
4.734783	2.30E-05	1.176067	0.99638	-1.33432	0.903229	-1.30138	0.770066	-1.12046
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2.265003	0.001057	1.238629	0.99638	1.258819	0.886829	1.430315	0.512368	2.326042
2.715233	0.00564	1.389427	0.99638	1.131236	0.972744	1.790445	0.468869	4.670484
1.425347	0.176108	-1.05951	0.99638	-1.16382	0.944809	-1.26144	0.723867	-7.61742
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1.384052	0.350631	1.059497	0.99638	-1.23248	0.934928	-1.43897	0.636873	-9.0695
3.481987	0.000496	1.223322	0.99638	-1.14035	0.969961	1.878737	0.417095	1.647784
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9.894828	6.00E-06	-1.08689	0.99638	1.110398	0.980882	-1.15151	0.934944	-1.24241
10.54619	4.00E-06	-1.04769	0.997224	1.106565	0.981388	-1.20379	0.903767	-1.29332
9.744049	5.00E-06	-1.0722	0.997224	1.088672	0.983738	-1.14565	0.935944	-1.28369
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5.716228	0.010948	-1.31102	0.99638	-1.56517	0.934592	-1.16289	0.958984	-1.15129
2.761069	0.002462	-1.2162	0.99638	-1.60214	0.774334	1.753916	0.449984	1.189004
2.927364	0.001936	-1.15319	0.99638	-1.50069	0.840289	1.926116	0.392654	1.339129
1.666889	0.110359	1.351104	0.99638	1.214832	0.94149	1.91875	0.364554	1.424669
-1.40662	0.145039	-1.03791	0.997224	-1.28201	0.860623	-1.19375	0.77709	-4.17527
-1.32876	0.209301	-1.11996	0.99638	-1.23385	0.881284	-1.18881	0.770066	-3.98413
-2.36243	0.000121	-1.05253	0.99638	-1.06462	0.976351	-1.27059	0.632339	-1.81685
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-1.28696	0.297471	1.096928	0.99638	1.315448	0.836864	1.479933	0.442458	4.529514
-1.35685	0.198656	1.055943	0.99638	1.339314	0.821778	1.610441	0.363455	4.759087
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-1.22435	0.462849	1.042203	0.997224	1.370517	0.821778	1.37603	0.575814	4.403262
1.567877	0.097589	-1.19143	0.99638	-1.29141	0.883851	1.316845	0.682166	2.258298
1.491955	0.138293	-1.24936	0.99638	-1.29805	0.877771	1.367197	0.618569	2.273705
1.604938	0.068348	-1.22701	0.99638	-1.29735	0.872552	1.249382	0.744281	2.198611
-3.27633	6.00E-05	-1.1834	0.99638	-1.06612	0.98102	-1.58351	0.45436	-1.15406
-3.05819	4.90E-05	-1.17384	0.99638	-1.02835	0.99233	-1.64953	0.384153	-1.15169
3.104197	0.000235	1.280012	0.99638	1.245169	0.923729	1.621517	0.461541	3.504625
2.945858	0.000365	1.254777	0.99638	1.19086	0.944527	1.62849	0.45436	3.650518
2.846725	0.000392	1.255298	0.99638	1.161327	0.952303	1.626512	0.442823	3.378843
2.930712	0.000535	1.262804	0.99638	1.186957	0.947799	1.715005	0.423323	3.761252
2.64552	0.000662	1.209545	0.99638	1.219457	0.928109	1.738528	0.379744	3.30889
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1.879887	0.011779	1.345879	0.99638	1.421779	0.781538	1.332491	0.630926	2.571085
1.851834	0.015309	1.369236	0.99638	1.320989	0.856934	1.363609	0.604563	2.577686
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6.125548	0.000215	1.320909	0.99638	1.167655	0.97284	1.481007	0.750831	1.957923
7.646354	0.000679	1.12402	0.99638	1.077636	0.990771	2.040267	0.601325	3.511576
7.611288	0.000759	1.137802	0.99638	1.041981	0.995405	2.105902	0.583286	3.50968
7.875535	0.000556	1.232373	0.99638	1.027445	0.99792	2.089474	0.582095	3.661967
7.877573	0.000609	1.203152	0.99638	1.015909	0.99934	2.098174	0.583272	3.642538
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3.458237	0.003399	1.225906	0.99638	1.324194	0.932537	1.837479	0.520341	3.922061
3.00078	0.00393	1.239701	0.99638	1.352081	0.916587	1.85364	0.464987	3.957702
3.118124	0.01003	1.237766	0.99638	1.38673	0.925511	2.249958	0.414361	4.594145
3.392615	0.002899	1.246256	0.99638	1.182083	0.965614	1.861474	0.494939	3.825121
3.152951	0.005276	1.136995	0.99638	1.419811	0.907972	1.947687	0.466271	4.109506
2.387911	0.089047	2.620757	0.99638	3.041121	0.530165	3.451214	0.324374	5.170005
-4.26335	3.10E-05	-1.3928	0.99638	-1.08487	0.9794	-1.27656	0.779125	1.042031
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-1.59116	0.220417	1.12841	0.99638	1.560262	0.830941	1.382599	0.732902	6.088667
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2.632083	0.004852	-1.326	0.99638	-1.40921	0.872552	1.389948	0.706208	2.016246
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-1.71265	0.239245	-1.07428	0.997224	-1.4164	0.916872	-1.24678	0.877333	-11.7572
5.183842	8.00E-06	1.269353	0.99638	-1.02434	0.995173	1.537007	0.562305	1.433875
1.731917	0.016503	1.097521	0.99638	-1.08573	0.972023	1.388748	0.525179	2.543589
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1.780131	0.015376	1.075872	0.99638	-1.07149	0.97639	1.427034	0.505322	2.665068
1.775381	0.017802	1.075381	0.99638	-1.04842	0.983771	1.48643	0.464756	2.989911
1.673017	0.395311	-1.41084	0.99638	1.166296	0.977295	1.741953	0.691871	4.435394
1.681798	0.397394	-1.39652	0.99638	1.28636	0.961091	1.823434	0.663232	4.974486
1.663199	0.405066	-1.43721	0.99638	1.190812	0.975573	1.82232	0.661187	4.793242
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1.768598	0.353912	-1.3301	0.99638	1.203939	0.973423	1.848662	0.659513	4.879823
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-1.83549	0.02586	-1.09936	0.99638	-1.20417	0.932261	-1.45486	0.543422	-4.36914

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5.275678	0.000617	1.612501	0.99638	1.640767	0.865273	1.298395	0.85915	1.827305
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4.274686	0.00014	1.649504	0.99638	2.137514	0.54832	1.261331	0.827381	1.163157
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3.689121	2.00E-05	1.616375	0.99638	1.320771	0.872552	1.151746	0.873953	1.571815
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1.478553	0.252557	-1.21963	0.99638	-1.02505	0.994874	1.853625	0.398554	2.185405
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1.446095	0.199958	1.362349	0.99638	1.82946	0.535627	1.628675	0.433676	4.225209
3.347771	0.03115	-1.14094	0.99638	1.22168	0.972023	1.293532	0.893958	2.481916
2.76357	0.048595	-1.26734	0.99638	1.200715	0.972571	1.303565	0.873343	2.289869
1.288856	0.288802	1.060339	0.99638	-1.27615	0.862711	1.347289	0.565883	2.544609
1.313719	0.208863	1.108726	0.99638	-1.29883	0.824056	1.28977	0.605154	2.468462
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-1.41302	0.186779	-1.0203	0.997621	-1.21377	0.918431	-1.33666	0.631106	-4.95456
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1.571392	0.136229	-1.05965	0.99638	1.096779	0.97602	1.452169	0.590986	3.02859
1.597564	0.125108	-1.03266	0.997224	1.023281	0.994747	1.470957	0.5774	3.124409
4.888298	0.00014	1.604304	0.99638	1.444491	0.888476	1.338996	0.790139	1.785556
5.021009	0.00019	1.269209	0.99638	1.139555	0.975101	1.792327	0.526261	2.750485
4.596285	0.000548	1.159266	0.99638	1.185635	0.967312	1.967001	0.477668	2.907272
-5.8868	4.00E-06	-1.58475	0.99638	-1.02724	0.994663	-1.13021	0.920402	1.292374
-3.44841	0.000616	-1.21445	0.99638	-1.34443	0.909025	-2.16593	0.354021	-2.86695
-3.92002	0.000853	-1.24896	0.99638	-1.30938	0.932537	-2.33049	0.356709	-3.04381
2.604606	0.718535	-1.70965	0.99638	2.25518	0.973392	1.898492	0.947391	-1.49855
2.887248	0.672389	1.043214	0.999492	2.293334	0.972744	1.971856	0.928726	-1.52859
1.763268	0.82258	-2.26788	0.99638	1.86873	0.976351	2.507374	0.889334	-1.00632
1.817685	0.815351	-1.42816	0.99638	2.035499	0.972744	1.992779	0.940257	-1.46931
1.91473	0.788316	-1.39278	0.996886	2.408694	0.958592	2.272086	0.90188	-1.0597
-2.22371	0.001181	-1.11925	0.99638	-1.27719	0.871841	-1.27714	0.686777	-2.178
2.410574	0.001333	1.187372	0.99638	1.326661	0.865389	1.706765	0.380691	2.928103
2.3109	0.003955	1.122878	0.99638	1.376963	0.85475	1.851521	0.35662	3.057763
2.349006	0.0019	1.159939	0.99638	1.311233	0.873428	1.726173	0.377164	2.984551

2.353956	0.002087	1.156904	0.99638	1.367232	0.84978	1.728305	0.380366	3.027985
2.562159	0.000845	1.209693	0.99638	1.361864	0.852867	1.640688	0.422242	2.863941
1.686868	0.096298	1.294682	0.99638	1.519572	0.799109	1.141449	0.903767	1.940011
4.543805	0.000192	1.091859	0.99638	1.321175	0.927384	1.520423	0.65436	1.936164
3.717243	0.00035	1.063806	0.996637	1.272595	0.931109	1.400097	0.708442	1.746958
4.282874	0.000212	1.061831	0.997224	1.308203	0.927924	1.485134	0.666091	1.888469
2.249946	0.003184	-1.02218	0.997621	1.175306	0.944844	1.535086	0.482004	2.526853
-1.35651	0.147022	-1.02097	0.997224	1.114099	0.952599	1.100288	0.891492	4.200511
3.156961	0.005117	1.110691	0.99638	-1.24514	0.951266	1.790885	0.525424	3.791534
3.260355	0.004275	1.141059	0.99638	-1.27141	0.945954	1.78764	0.531666	4.027928
3.181855	0.004609	1.075699	0.99638	-1.24928	0.950417	1.766375	0.535924	3.577337
3.212027	0.006968	1.048429	0.997224	-1.24468	0.953435	1.756285	0.57028	3.927211
3.503803	0.002571	1.173362	0.99638	-1.29954	0.938043	1.605753	0.628109	3.663176
-1.4742	0.200655	1.068498	0.99638	1.560895	0.743693	1.747307	0.395764	5.01971
1.691547	0.516429	-1.15152	0.99638	1.608279	0.932537	-1.10298	0.975895	-1.12562
-3.72256	0.002478	-1.17159	0.99638	-1.43873	0.909025	-1.5333	0.694378	-7.07903
-3.13825	0.007506	-1.1294	0.99638	-1.319	0.934928	-1.62724	0.632339	-7.27533
2.520287	0.27826	1.406416	0.99638	1.43259	0.961345	1.268435	0.941342	-6.41191
-1.282	0.330986	-1.12827	0.99638	-1.18102	0.928558	-1.09147	0.922221	-4.19903
2.133524	0.14109	2.766062	0.99638	2.267863	0.714149	2.57108	0.403857	4.438948
-1.18533	0.814257	-1.1465	0.99638	-1.50398	0.926871	1.226862	0.923083	-12.1314
1.951827	0.028739	1.154812	0.99638	1.156804	0.95702	1.778061	0.403203	6.575718
3.194841	0.000259	1.040285	0.997224	-1.13977	0.96408	1.015899	0.991977	1.783582
-3.28017	9.80E-05	-1.29956	0.99638	-1.27618	0.908075	-1.25616	0.768041	-2.42061
2.740364	0.000358	1.103225	0.99638	1.075392	0.977699	1.449556	0.54408	2.311834
3.584625	5.70E-05	1.078983	0.99638	1.105	0.972744	1.552882	0.501104	2.203373
-1.07095	0.904212	-1.24176	0.99638	-1.43764	0.909025	-1.74054	0.57335	-11.8279
1.635668	0.003612	1.166738	0.99638	-1.02439	0.988982	-1.27748	0.516345	-4.41272
3.65173	0.00615	-1.27118	0.99638	1.21484	0.965516	1.231105	0.898869	3.214047
-1.77676	0.185786	-1.31566	0.99638	-1.99645	0.706851	-1.17148	0.919421	-9.2303
-1.85381	0.16108	-1.28184	0.99638	-2.09489	0.663966	-1.07881	0.967557	-9.42952
-2.71913	0.032628	-1.31964	0.99638	-1.57414	0.881284	-2.08658	0.483991	-8.8333
2.188855	0.00854	-1.13819	0.99638	1.058762	0.983771	1.406533	0.629985	1.948317
-3.25903	0.000198	-1.38504	0.99638	-1.05538	0.986307	-1.3894	0.652395	-1.64385
-3.2413	6.60E-05	-1.41552	0.99638	-1.0972	0.972744	-1.28227	0.725086	-1.60741
-3.17539	0.000208	-1.36586	0.99638	-1.10579	0.972744	-1.41923	0.618202	-1.71239
-3.29107	8.90E-05	-1.37687	0.99638	-1.13714	0.959864	-1.34681	0.671176	-1.69498
-3.13757	0.000106	-1.38001	0.99638	-1.13448	0.95919	-1.37859	0.625457	-1.69339
2.948358	0.00038	1.106227	0.99638	1.002545	0.999969	1.224444	0.809453	1.547207
6.785047	1.30E-05	1.206469	0.99638	1.316939	0.928109	2.022607	0.423323	1.708134
5.992067	2.90E-05	1.057243	0.997224	1.318007	0.928109	2.051819	0.413093	1.764945
1.990339	0.1812	2.26538	0.99638	2.941647	0.540621	1.564649	0.729963	2.071176
1.755951	0.040243	1.023856	0.997245	-1.5284	0.737741	1.188563	0.832846	1.732992
3.325829	0.032705	-1.07934	0.997224	-1.60894	0.909025	1.097023	0.969541	1.39513
3.033053	0.039305	-1.14182	0.99638	-1.62256	0.895539	1.140682	0.953834	1.474786
3.613157	0.02569	-1.12204	0.99638	-1.6139	0.912217	1.142637	0.957117	1.437091
3.396316	0.027181	-1.07299	0.997224	-1.62835	0.900408	1.076568	0.976507	1.341184

3.931714	0.024531	-1.06385	0.997224	-1.6869	0.907239	1.183318	0.945957	1.535902
-3.32657	0.009976	-1.45961	0.99638	-2.05051	0.737741	-1.72906	0.622199	-6.53779
2.326691	0.23021	1.458637	0.99638	1.335095	0.964083	1.175497	0.955048	-1.00107
-4.16947	1.10E-05	-1.33339	0.99638	-1.05996	0.983236	-1.32418	0.702347	1.247984
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1.502493	0.757912	-4.72777	0.99638	1.343589	0.974343	-1.01026	0.999509	-1.1697
1.655704	0.520667	1.118446	0.997224	-3.06192	0.716951	1.61096	0.811	1.316897
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-1.28591	0.493724	-1.05647	0.997102	-1.26537	0.927465	-1.25243	0.811105	-4.39452
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3.59049	0.005865	-1.39597	0.99638	-1.41272	0.923794	1.244892	0.888141	-1.25942
1.200509	0.896512	-2.11628	0.99638	1.111041	0.988216	-1.01039	0.999382	-1.11507
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1.485551	0.093208	1.221155	0.99638	1.209664	0.914168	1.634434	0.357555	2.980673
1.699776	0.446359	-1.33855	0.99638	1.622371	0.954393	-1.01216	0.997833	-1.04951
2.957176	0.529487	-2.27605	0.99638	2.793327	0.931689	-1.09808	0.990389	-1.11336
8.509455	8.00E-05	2.123372	0.99638	1.613604	0.886195	1.398475	0.82058	1.3306
11.09337	9.20E-05	1.402936	0.99638	1.443309	0.938004	2.00687	0.605526	3.937042
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5.043054	0.00035	1.436165	0.99638	1.405996	0.917476	1.930382	0.497727	4.75396
2.240784	0.009076	1.085128	0.99638	1.010726	0.999007	1.634206	0.476735	5.189409
2.508866	0.00083	1.166708	0.99638	1.12225	0.964083	1.461864	0.527965	3.148341
1.531132	0.116232	1.522999	0.99638	1.489999	0.751216	1.405763	0.582189	4.095155
3.199689	0.000786	1.369469	0.99638	-1.11249	0.97543	1.877942	0.403857	2.51344
3.327864	0.000996	1.338482	0.99638	-1.09812	0.977914	2.195339	0.354631	3.002374
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2.609957	0.002308	1.023572	0.997621	1.030016	0.993795	1.907997	0.363341	3.123504
2.638694	0.002072	1.010528	0.999103	-1.00215	0.999969	1.809937	0.393953	2.988029
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2.432538	0.004762	-1.0444	0.997224	-1.02451	0.994681	1.91665	0.363455	3.127218
2.68581	0.001876	1.067618	0.99638	-1.04793	0.988242	1.851601	0.385004	3.058817
1.791902	0.096057	1.091211	0.99638	-1.16777	0.961255	2.289379	0.330322	4.583947
1.198883	0.619078	-1.07346	0.99638	-1.18095	0.951481	1.685188	0.45436	6.199713
1.230497	0.57268	-1.02775	0.997245	-1.21517	0.942804	1.65674	0.478303	6.206022
1.187149	0.634929	-1.04483	0.997224	-1.20279	0.943675	1.69894	0.439786	6.131157
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1.945784	0.011781	1.195627	0.99638	-1.0333	0.991159	1.9086	0.324374	2.427851
2.907969	0.010372	-1.20641	0.99638	-1.20289	0.962428	1.149015	0.931292	-1.1209
1.757298	0.123313	-1.36341	0.99638	1.0055	0.999765	2.125957	0.360858	3.262031

1.458689	0.154823	-1.12429	0.99638	1.037494	0.989149	1.488461	0.493265	3.577281
1.052303	0.935185	1.179024	0.99638	1.275054	0.951909	2.186476	0.44386	10.33067
1.826646	0.224947	-1.28492	0.99638	-1.26615	0.954361	1.987682	0.522546	2.318571
4.635267	0.001906	1.940873	0.99638	-1.4976	0.912217	1.295775	0.867204	1.322746
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4.840303	0.001728	1.969729	0.99638	-1.55501	0.897147	1.332729	0.849623	1.425544
3.798161	0.003773	1.783375	0.99638	-1.65002	0.856709	1.261908	0.875366	1.379517
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1.03833	0.945522	1.237854	0.99638	-1.27716	0.941673	-1.10214	0.953778	-11.8543
1.791008	0.060772	1.174366	0.99638	-1.01032	0.999303	1.12392	0.919291	-3.76612
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4.325777	0.000183	1.392303	0.99638	2.400055	0.47644	1.369582	0.749412	1.249744
4.382895	0.000125	1.532852	0.99638	2.516936	0.440607	1.355045	0.752841	1.177435
1.449153	0.589528	-1.16742	0.99638	-1.8429	0.868991	2.206305	0.557505	1.619047
1.638564	0.470981	-1.14895	0.99638	-1.88954	0.8678	2.164743	0.589774	1.492539
1.510697	0.162481	1.029582	0.997224	1.06509	0.982625	1.882666	0.354631	6.737508
1.457815	0.221519	1.030248	0.997224	1.039103	0.990771	1.899743	0.354631	6.464743
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3.895321	0.018859	1.79375	0.99638	-1.00219	0.999969	1.796141	0.689092	1.31136
1.634495	0.039026	1.191485	0.99638	1.156272	0.943009	1.580503	0.392654	4.159114
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1.995732	0.029781	1.08325	0.99638	-1.01664	0.997054	2.032889	0.349222	7.396505
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6.155361	1.20E-05	1.501852	0.99638	1.034976	0.993795	1.523527	0.633852	2.107107
1.744211	0.009703	1.063958	0.99638	1.089	0.967947	1.126766	0.859275	2.922448
1.9571	0.072247	-1.19386	0.99638	1.105435	0.977699	1.860331	0.457167	7.174374
2.076632	0.040324	-1.06325	0.996891	1.085472	0.981388	1.837835	0.444442	6.490734
2.074393	0.044058	-1.06924	0.99638	1.034203	0.993795	1.929791	0.420464	6.047673

2.043575	0.053177	1.099022	0.99638	-1.00216	0.999969	2.020931	0.395914	5.711133
2.164576	0.001625	1.14314	0.99638	1.209293	0.917137	1.507627	0.444442	2.67445
-6.09466	0.015357	-1.73899	0.99638	-1.02358	0.999303	1.328324	0.917161	5.188365
1.56731	0.065052	1.041048	0.997224	1.173106	0.933467	1.244137	0.729319	3.210394
-5.00577	1.70E-05	-1.05592	0.99638	1.058597	0.944321	5.243075	0.068737	4.937446
-1.38687	0.389697	-1.12516	0.99638	1.02944	0.994528	-1.50531	0.622745	-5.39066
1.467124	0.088182	1.074748	0.99638	1.167238	0.929925	1.343101	0.56454	2.715908
4.517555	0.019427	1.185469	0.99638	-1.03934	0.996416	2.144518	0.619518	7.62988
4.275128	0.028056	1.048461	0.997621	1.04143	0.996416	2.359231	0.574211	8.164297
2.558761	0.005185	-1.1909	0.99638	-1.10796	0.976351	1.40688	0.684763	1.777046
-3.10585	4.90E-05	-1.20563	0.99638	-1.01137	0.998267	-2.15362	0.262046	-1.7732
-2.06467	0.000398	-1.05923	0.99638	-1.11653	0.949164	-2.15845	0.088259	-1.79602
4.424779	2.30E-05	1.396323	0.99638	1.474998	0.830476	1.506124	0.577257	2.16469
4.044847	5.80E-05	1.284235	0.99638	1.466819	0.839151	1.603645	0.512317	2.245626
-1.28583	0.594351	1.435588	0.99638	1.528354	0.8678	1.16474	0.919421	4.009395
-1.28492	0.583733	1.40634	0.99638	1.544314	0.855506	1.196363	0.895056	3.984723
-1.32781	0.516429	1.34771	0.99638	1.617647	0.824056	1.252369	0.847801	4.302064
-1.42801	0.37315	1.276232	0.99638	1.531347	0.845221	1.319567	0.78605	4.168647
-1.35785	0.47206	1.377382	0.99638	1.549395	0.847413	1.244991	0.851176	4.201705
2.200266	0.117283	1.153557	0.99638	2.047208	0.765738	3.120052	0.340599	7.859371
1.948273	0.079706	1.259226	0.99638	1.791264	0.737741	2.400826	0.338483	4.246877
1.908868	0.039281	1.140706	0.99638	1.182902	0.951481	2.159566	0.323412	6.769229
2.192516	0.014142	1.187291	0.99638	1.194045	0.949843	1.948223	0.362992	6.241281
2.30372	0.000651	1.120607	0.99638	-1.02784	0.99159	1.62147	0.370176	2.603687
2.142704	0.002863	1.018867	0.997621	-1.00535	0.999353	1.732817	0.354631	2.695519
2.322812	0.000624	1.141132	0.99638	-1.03223	0.990728	1.668128	0.354631	2.602644
2.348808	0.002366	1.065378	0.99638	1.042913	0.988242	1.816789	0.354631	3.076509
2.573365	0.00108	1.129806	0.99638	-1.0285	0.993795	1.865229	0.354631	3.265556
-1.32179	0.234937	-1.07917	0.99638	-1.41451	0.737741	-1.17317	0.803235	-3.23819
2.1933	0.002402	1.224396	0.99638	1.097293	0.971939	1.616692	0.403203	3.129113
2.116001	0.005681	1.219771	0.99638	1.092123	0.973399	1.766206	0.357555	3.485573
-4.41272	3.00E-06	-1.35336	0.99638	1.007551	0.99934	-1.1371	0.887339	1.587817
-1.61168	0.123801	-1.09917	0.99638	-1.24021	0.932537	-1.41587	0.605526	-4.42369
-1.52275	0.119557	-1.11161	0.99638	-1.22782	0.926738	-1.41693	0.568391	-4.41164
-1.47825	0.196838	-1.08838	0.99638	-1.18393	0.953434	-1.47938	0.528493	-4.66655
-1.46805	0.142622	-1.07371	0.99638	-1.14628	0.951622	-1.43172	0.535924	-4.45059
-1.72557	0.09071	-1.10366	0.99638	-1.24579	0.930649	-1.59722	0.513614	-5.61602
-1.4323	0.598065	1.143563	0.99638	1.044147	0.995173	-1.59878	0.767998	-4.81212
2.621533	0.185949	1.231245	0.99638	-3.20215	0.704776	-2.21652	0.636873	-1.97625
3.943463	0.113303	1.168456	0.99638	-2.58485	0.853343	-1.79118	0.813236	-2.51525
3.893341	0.110367	1.169043	0.99638	-2.60051	0.850183	-1.81894	0.803011	-2.57643
4.201659	0.108478	1.191681	0.99638	-2.78265	0.845221	-1.87907	0.802227	-2.67019
3.974531	0.114532	1.172547	0.99638	-2.73064	0.845221	-1.89893	0.789545	-2.57734
4.465929	0.097526	1.176227	0.99638	-2.86415	0.841453	-2.0193	0.772274	-2.85604
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-1.70678	0.016257	-1.07439	0.99638	-1.23895	0.881866	-1.2028	0.75833	-2.39208
6.366713	0.001058	1.968531	0.99638	3.403002	0.521668	2.009992	0.587094	3.300399

-2.37356	0.001079	-1.11661	0.99638	-1.31595	0.864714	-1.42518	0.543711	-2.19977
-4.57696	9.00E-06	-1.52012	0.99638	-1.04894	0.988241	-1.12867	0.912095	1.061516
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-5.09188	1.20E-05	-1.44635	0.99638	-1.06632	0.983771	-1.23708	0.828179	1.222893
-5.84471	6.00E-06	-1.5357	0.99638	-1.04839	0.989709	-1.18394	0.879726	1.351654
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-5.00544	1.00E-06	-1.54044	0.99638	-1.14103	0.955388	-1.19532	0.822133	1.365073
-4.86298	3.00E-06	-1.49382	0.99638	-1.19067	0.943009	-1.31512	0.708958	1.293364
-4.66364	4.00E-06	-1.40999	0.99638	-1.16957	0.950417	-1.24515	0.778384	1.266435
-5.10366	1.00E-06	-1.51958	0.99638	-1.14514	0.954393	-1.14315	0.883992	1.359095
1.727956	0.38181	-1.63177	0.99638	-2.99969	0.602773	1.90507	0.63906	-1.06579
1.688325	0.41486	-1.66771	0.99638	-3.05062	0.602798	2.018483	0.609615	-1.03416
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1.69914	0.012399	1.245468	0.99638	1.216762	0.889826	1.422257	0.459196	3.010825
2.255854	0.022111	1.899734	0.99638	1.113204	0.976351	-1.48746	0.642514	-4.24553
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-4.31295	0.003023	-1.44266	0.99638	-1.28808	0.953029	-1.55524	0.726482	-3.74067
4.461683	0.001345	1.131062	0.99638	-1.03475	0.995173	1.566672	0.700058	1.937452
5.031547	0.000901	1.187557	0.99638	1.035808	0.995173	1.478848	0.759553	1.898306
1.284766	0.48879	1.15356	0.99638	1.124463	0.971812	2.840922	0.259154	8.378642
1.250765	0.53888	1.159564	0.99638	1.096664	0.97639	2.741845	0.262046	7.531006
-2.75138	0.000609	-1.26631	0.99638	-1.23033	0.926871	-1.6715	0.423323	-1.56417
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-1.7479	0.022227	-1.20554	0.99638	-1.51844	0.671675	-1.10562	0.908349	-3.05646
-1.53114	0.050202	-1.1019	0.99638	-1.4462	0.679202	-1.14536	0.833391	-3.00157
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-1.16244	0.50837	1.234734	0.99638	-1.3124	0.796844	-1.57398	0.345232	1.476816
-1.76739	0.252573	-1.19974	0.99638	-1.22645	0.964083	-2.40748	0.410063	-10.074
2.162766	0.002552	1.037943	0.997224	-1.08415	0.974729	1.373453	0.590504	2.23593
2.15353	0.000539	1.048702	0.99638	-1.08536	0.969837	1.190912	0.762172	1.857287
-11.0103	3.00E-06	-2.10317	0.99638	-1.06831	0.988242	-1.1992	0.907032	1.410848
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-1.77355	0.279824	-1.51965	0.99638	-2.154	0.743421	-2.10434	0.508695	-9.39669
3.110629	0.039143	-1.27266	0.99638	-1.21039	0.972744	1.268821	0.901536	-1.04785
-6.916	1.30E-05	-1.64297	0.99638	-1.00263	0.999969	-1.26836	0.841809	1.533738
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4.325685	0	1.223387	0.99638	-1.11888	0.953089	1.107002	0.891525	-1.20242
3.875926	2.00E-06	1.165966	0.99638	-1.1096	0.961345	1.263989	0.691166	-1.10389
2.630498	6.10E-05	1.356166	0.99638	1.302733	0.840424	1.307381	0.610248	1.669766
2.519799	9.20E-05	1.331379	0.99638	1.316129	0.826141	1.274487	0.649224	1.730177
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1.975446	0.105874	2.076027	0.99638	2.392244	0.555618	2.018384	0.452601	2.394405
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1.924281	0.047406	1.465054	0.99638	1.498267	0.830144	2.293282	0.317936	7.407608
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1.86256	0.063959	1.438092	0.99638	1.507036	0.830144	2.283344	0.323412	7.269861
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3.709747	0.106757	2.330315	0.99638	3.694585	0.71321	-1.03222	0.990826	-1.04693
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-5.08946	2.00E-06	-1.41779	0.99638	-1.03085	0.992829	-1.06795	0.958189	1.501398
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1.061983	0.852026	1.017942	0.997621	1.388062	0.802577	1.275557	0.695834	5.47095
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5.178813	0.000222	1.324796	0.99638	1.296355	0.942367	1.646877	0.620092	2.647854
1.337134	0.250595	1.10166	0.99638	-1.18168	0.929971	1.565397	0.40874	3.408408
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3.17518	0.545252	-1.69534	0.99638	3.493693	0.934928	1.027207	0.998607	-1.51308
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3.310172	0.000229	1.36025	0.99638	1.442749	0.840424	1.328148	0.722628	1.488136
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2.267722	0.096418	2.62853	0.99638	2.744189	0.556282	2.566285	0.391755	3.724707
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-4.74699	2.00E-06	-1.5084	0.99638	-1.01561	0.996719	-1.13786	0.89165	1.289462
1.410182	0.486587	-1.36181	0.99638	-3.04086	0.407281	-1.04008	0.985821	-7.82846
1.626133	0.32884	-1.43564	0.99638	-3.24328	0.441855	-1.12666	0.950986	-10.5749
1.281951	0.570137	-1.27636	0.99638	-2.5186	0.434259	1.002441	0.999438	-6.58257
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3.154863	1.50E-05	1.343221	0.99638	-1.01415	0.996416	1.151724	0.845061	1.270459
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3.412422	0.000212	1.310692	0.99638	1.203393	0.945308	1.357478	0.703488	3.139584
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3.401241	0.000266	1.245192	0.99638	1.2267	0.938043	1.443042	0.630706	3.363288
3.336882	6.00E-05	1.139879	0.99638	1.14119	0.95702	1.616271	0.44064	2.092957
3.077464	0.000183	1.058143	0.99638	1.158902	0.953029	1.541374	0.497107	1.896252
-1.14779	0.63044	1.015772	0.998178	-1.0836	0.973185	-1.17197	0.824214	-5.29231
-1.25171	0.42212	-1.02575	0.997224	-1.24031	0.909025	-1.22905	0.763169	-5.92892
2.078402	0.010105	1.243826	0.99638	1.345981	0.867742	1.613192	0.45436	4.722643
2.064187	0.011932	1.231003	0.99638	1.307393	0.888741	1.541532	0.500751	4.585219
1.126703	0.618353	1.11329	0.99638	1.272653	0.841116	1.463036	0.406467	4.471648
2.305064	0.004342	1.254059	0.99638	1.242715	0.923813	1.261201	0.768782	2.554025
2.443591	0.006489	1.274841	0.99638	1.538536	0.812487	1.468852	0.622156	3.555266
-1.88671	0.098799	-1.59568	0.99638	1.421758	0.88966	1.275886	0.82878	5.941586
1.716486	0.60958	-1.14254	0.997224	1.31098	0.976351	1.070962	0.988367	-1.1721
1.815035	0.028821	1.404676	0.99638	-1.02458	0.993795	1.030951	0.980778	-4.19308
1.752908	0.055973	1.341379	0.99638	-1.01629	0.996733	1.082654	0.947113	-3.96815
1.763829	0.019001	1.116275	0.99638	1.206855	0.917659	1.264031	0.704426	2.739409
4.443274	0.000109	1.738301	0.99638	2.273763	0.506417	1.484281	0.652162	2.180351
2.857955	0.000847	1.228751	0.99638	1.318147	0.893694	1.771895	0.40462	2.406472
2.97351	0.000542	1.214565	0.99638	1.368922	0.868991	1.686925	0.442458	2.402323
-2.61555	0.000107	-1.77128	0.99638	-1.57351	0.588655	-1.64877	0.354631	-1.40869
-5.60073	2.00E-05	-2.85682	0.99638	-2.6482	0.407281	-1.86286	0.443571	-1.63164
1.630843	0.198909	1.156608	0.99638	1.667498	0.786515	1.862003	0.452311	4.527782
3.303104	0.057046	3.147117	0.99638	3.075675	0.641842	3.305058	0.395723	8.150817
3.298028	0.06738	3.087391	0.99638	3.114756	0.65124	3.507627	0.391756	8.232336
1.047796	0.879094	-1.12211	0.99638	-1.48184	0.677502	-1.26406	0.687597	-3.34338
1.491041	0.690047	-1.31869	0.99638	1.520807	0.953603	1.151227	0.968506	-1.04572
4.909453	1.00E-06	1.143751	0.99638	1.240085	0.912217	1.231987	0.766605	-1.06948
-6.63196	1.60E-05	-1.47698	0.99638	1.04729	0.991507	-1.1831	0.902912	1.531618
-2.09512	0.062972	-1.213	0.99638	-1.40472	0.907662	-2.32711	0.35662	-5.86889
-1.67575	0.38516	-1.2385	0.99638	-2.03907	0.814483	-1.23414	0.915994	-12.6181
2.434857	0.003197	1.231284	0.99638	1.548319	0.759933	1.510468	0.541699	2.998617
1.886684	0.425246	1.092655	0.997224	1.881052	0.914994	-1.01889	0.996034	-1.09617
2.581465	0.000383	1.351696	0.99638	1.333807	0.852867	1.416743	0.548016	1.741634
3.530787	2.80E-05	1.320313	0.99638	1.370652	0.846611	1.238531	0.774192	1.616162
2.463693	0.557962	1.040954	0.999103	2.36539	0.925511	1.036587	0.995971	-1.07582
1.66394	0.686639	-1.42874	0.99638	1.59899	0.950417	-1.00385	0.999619	-1.03765
-2.65571	0.015328	-1.49418	0.99638	-2.5654	0.491916	-1.98485	0.448234	-5.73036
-8.88083	1.00E-06	-1.80114	0.99638	1.003543	0.999969	-1.14214	0.917101	2.276821

-6.68534	1.00E-06	-1.60804	0.99638	1.036627	0.991349	-1.14763	0.894494	2.251016
-6.97124	0.000267	-1.3417	0.99638	-1.13231	0.980754	-1.37247	0.833959	-1.02966
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-4.44527	5.00E-06	-1.39626	0.99638	-1.02324	0.994681	-1.12686	0.904061	1.389848
-1.18158	0.728158	-1.04568	0.997224	-1.55961	0.851451	1.203762	0.888241	-4.96023
-1.25494	0.636942	1.006492	0.999559	-1.4819	0.881284	1.262288	0.853379	-4.89505
-1.137	0.797979	1.076302	0.99638	-1.4844	0.872552	1.182325	0.903767	-5.01716
-1.05093	0.920378	1.064538	0.997005	-1.36624	0.909025	1.158259	0.912095	-4.41059
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-4.35397	4.00E-06	-1.33113	0.99638	-1.05775	0.982762	-1.22324	0.792377	1.151797
-12.3553	5.00E-06	-2.27121	0.99638	-1.26696	0.954122	-1.14407	0.944335	1.463431
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1.418479	0.208276	-1.10555	0.99638	-1.13467	0.95702	1.351277	0.638595	3.24218
1.497407	0.134983	-1.07379	0.99638	-1.16972	0.944936	1.266813	0.731168	3.098929
1.496323	0.128909	-1.03406	0.997224	-1.20353	0.928109	1.232372	0.767156	3.033916
1.530673	0.11332	-1.02566	0.997224	-1.19795	0.931827	1.223416	0.782439	2.841657
1.401375	0.232792	-1.08629	0.99638	-1.16292	0.94922	1.378784	0.616899	3.185445
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-2.00455	0.050003	-1.21576	0.99638	-1.39068	0.888741	-1.69029	0.510218	-5.14754
-1.89978	0.073203	-1.16693	0.99638	-1.38788	0.889831	-1.76665	0.476051	-5.36562
-1.83209	0.089548	-1.14062	0.99638	-1.38717	0.889475	-1.82424	0.447519	-5.39829
-1.97768	0.052101	-1.207	0.99638	-1.31216	0.917659	-1.66128	0.521294	-5.14111
1.925789	0.010306	1.151499	0.99638	1.011489	0.998118	1.391297	0.574724	2.519509
1.993264	0.008781	1.158707	0.99638	1.002184	0.999969	1.4081	0.572043	2.793484
1.991361	0.007497	1.120595	0.99638	1.042411	0.987618	1.309899	0.671176	2.384989
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-6.1998	0.001054	-1.66735	0.99638	-1.86829	0.848394	-2.18612	0.523486	-3.71605
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1.858474	0.006883	1.300568	0.99638	1.233595	0.890682	1.05628	0.955093	2.352948
3.01857	0.000983	1.241189	0.99638	1.508388	0.82316	1.483441	0.607796	1.834792
2.471357	0.001181	1.286631	0.99638	1.08818	0.976158	1.457275	0.541674	1.831132
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1.352422	0.368203	1.078517	0.99638	-1.02081	0.995773	1.204579	0.841986	2.463635
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-1.64547	0.018683	-1.06991	0.99638	-1.27292	0.850281	-1.44045	0.442458	-2.48631
-4.97893	5.00E-06	-1.4599	0.99638	-1.09812	0.976158	-1.22521	0.816748	-1.00431
2.460349	0.000489	1.242914	0.99638	1.029783	0.991465	1.445885	0.510018	1.910565
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1.495765	0.687819	-1.37979	0.99638	1.29602	0.975754	-1.08291	0.983889	-1.49466

1.520817	0.67229	-1.28687	0.99638	1.311278	0.973399	-1.04115	0.992258	-1.45824
1.414791	0.700433	-1.29225	0.99638	1.253793	0.976351	-1.01735	0.997565	-1.3638
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1.920366	0.012421	1.0558	0.99638	1.121122	0.96296	1.623038	0.410063	3.921858
1.418638	0.382102	1.21434	0.99638	-1.52219	0.848424	1.677143	0.534133	4.602037
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9.141886	0.000148	2.561206	0.99638	1.975504	0.827379	-1.31639	0.879116	-4.31478
14.81104	6.00E-06	2.803264	0.99638	1.766133	0.856934	1.009888	0.997953	-3.39139
7.05379	3.00E-05	1.958161	0.99638	1.457703	0.898168	-1.04409	0.982736	-2.89808
8.024956	1.10E-05	2.070101	0.99638	1.55488	0.866908	-1.07896	0.966953	-3.60693
9.88539	1.00E-06	1.825897	0.99638	1.400357	0.893161	1.064816	0.968734	-3.54277
16.78095	1.00E-06	2.774739	0.99638	1.79837	0.813908	1.058534	0.977449	-3.7613
24.3453	2.00E-06	3.320456	0.99638	1.762403	0.872552	1.642717	0.733706	-1.89118
15.13877	6.00E-06	2.925426	0.99638	1.647379	0.882794	1.186543	0.933354	-2.42254
10.01064	3.00E-06	2.11934	0.99638	1.447148	0.902733	1.029879	0.989836	-3.13664
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1.472696	0.416964	1.091031	0.99638	-1.43108	0.913313	1.441819	0.750806	2.690368
1.539678	0.373336	1.186747	0.99638	-1.52249	0.887701	1.4463	0.758751	2.597437
1.543869	0.369757	1.155439	0.99638	-1.52972	0.883851	1.464129	0.74662	2.636971
1.607936	0.322825	1.223084	0.99638	-1.53833	0.882175	1.427106	0.770154	2.594742
1.535752	0.373454	1.156221	0.99638	-1.51689	0.888476	1.457455	0.749081	2.660496
1.827615	0.032217	1.024796	0.997224	1.259453	0.914168	1.179076	0.847986	2.356545
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1.435113	0.52965	-1.51653	0.99638	-3.50194	0.454146	1.260404	0.893958	-1.44906
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1.665553	0.00863	1.165909	0.99638	-1.2441	0.852867	1.437442	0.403857	1.9867
3.95035	6.00E-06	1.07348	0.99638	1.080947	0.97639	1.554253	0.454565	1.29388
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1.308291	0.655343	1.09669	0.99638	-2.48369	0.640024	1.43572	0.802181	1.344688
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3.665828	0.051017	-1.1045	0.997224	-1.02809	0.998401	2.395132	0.568391	6.212128
3.707652	0.05203	-1.11892	0.997224	1.061413	0.993795	2.546355	0.539375	7.159392
1.432907	0.123505	-1.00382	0.999559	-1.08001	0.97284	1.634615	0.355434	2.176754
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2.372427	0.28174	1.118992	0.997224	-3.56051	0.689586	-2.09175	0.703129	-1.92975
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2.529759	0.00093	1.180164	0.99638	1.340231	0.862924	1.278619	0.729319	2.456657
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1.776575	0.052549	-1.06128	0.99638	-1.17237	0.951266	1.070896	0.957117	2.655313
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4.785704	0	1.395241	0.99638	1.187128	0.917659	1.309437	0.605154	-1.85684
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2.809665	0.01754	1.480954	0.99638	-1.04098	0.993795	2.032065	0.46553	-1.06504
2.847012	0.015024	1.424066	0.99638	1.010426	0.99934	2.143521	0.430979	-1.0342
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6.581852	0.001363	1.825211	0.99638	2.556025	0.713753	3.864143	0.330322	4.136668
1.676657	0.711158	-1.25655	0.99638	1.850905	0.951307	1.112311	0.984548	-1.07904
4.726252	0.521818	-1.68914	0.99638	5.156095	0.928109	1.127449	0.990978	-2.17291
7.934542	2.00E-06	1.573685	0.99638	1.28084	0.930649	1.164198	0.904473	-3.2926
7.435141	1.00E-06	1.366359	0.99638	1.355205	0.898525	1.237949	0.835544	-3.09131
7.69084	2.00E-06	1.539401	0.99638	1.241812	0.94149	1.219123	0.856141	-3.33662
7.343152	2.00E-06	1.44374	0.99638	1.296093	0.924573	1.278541	0.80492	-3.13417
7.591799	1.00E-06	1.568239	0.99638	1.306043	0.917659	1.254578	0.822444	-3.1985
1.758064	0.037327	1.320196	0.99638	-1.29561	0.883639	1.470038	0.527965	1.88631
1.749551	0.033606	1.260224	0.99638	-1.2378	0.914168	1.566801	0.445024	1.996094
1.73292	0.041047	1.231231	0.99638	-1.25899	0.908075	1.608556	0.432118	2.091061
1.723751	0.039326	1.284828	0.99638	-1.24312	0.914168	1.603183	0.42796	1.997037
4.13864	1.00E-05	1.78964	0.99638	1.614379	0.683497	1.421517	0.597832	1.739248
3.754972	2.20E-05	1.690259	0.99638	1.654882	0.645242	1.467496	0.548016	1.791112
4.365908	1.30E-05	1.827923	0.99638	1.63984	0.707271	1.456971	0.592723	1.890031
4.082128	1.30E-05	1.798017	0.99638	1.625209	0.682257	1.464805	0.561683	1.79416
4.055059	2.60E-05	1.71199	0.99638	1.617426	0.720109	1.491069	0.564205	1.789981
5.23577	6.50E-05	1.373647	0.99638	1.524742	0.856248	-1.05105	0.976718	-1.02049
4.291692	4.90E-05	1.124523	0.99638	1.142426	0.966895	1.399404	0.685701	1.618073
3.83822	8.70E-05	1.03734	0.997224	1.126905	0.970485	1.443956	0.629194	1.654585
1.006335	0.987771	1.175174	0.99638	1.493467	0.794405	1.556309	0.499373	5.785841
1.097065	0.788268	1.234859	0.99638	1.511606	0.744618	1.40205	0.596199	4.552097
2.239747	0.000353	1.148796	0.99638	1.064942	0.97639	1.08396	0.920201	2.297844
1.713313	0.04621	-1.19303	0.99638	-1.47453	0.766597	1.187768	0.830504	1.663904
1.539287	0.10536	-1.27846	0.99638	-1.51852	0.720109	1.272876	0.722948	1.819103
1.622339	0.071177	-1.19103	0.99638	-1.66615	0.602773	1.29514	0.70354	1.808582

1.578255	0.086655	-1.21023	0.99638	-1.62882	0.625744	1.264275	0.733455	1.797129
1.544188	0.098306	-1.24317	0.99638	-1.62603	0.615967	1.234625	0.763653	1.77925
-5.88598	3.30E-05	-1.84258	0.99638	-2.80283	0.407281	-1.48757	0.685167	-3.03636
-1.69382	0.195974	-1.15525	0.99638	-1.28453	0.938504	-1.63561	0.592723	-4.3271
-1.74897	0.167288	-1.18957	0.99638	-1.27173	0.942897	-1.56191	0.635287	-4.09148
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-1.61714	0.267649	-1.11013	0.99638	-1.30994	0.933467	-1.67083	0.592723	-5.35107
2.586246	0.00291	1.164051	0.99638	1.202807	0.945899	1.457227	0.613263	1.771182
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-4.02344	0.003238	-1.2549	0.99638	-1.57727	0.881273	-1.92788	0.535924	-4.09799
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-4.29429	0.001071	-1.30875	0.99638	-1.57525	0.8678	-1.79935	0.550636	-4.04917
-4.10796	0.004298	-1.1756	0.99638	-1.64398	0.872552	-1.83985	0.596836	-5.01119
1.843961	0.013253	1.084871	0.99638	1.152013	0.947799	1.508654	0.459196	2.508318
1.984374	0.043648	-1.07458	0.99638	-1.88015	0.622142	-1.24857	0.823922	-4.39677
1.80454	0.067562	1.0728	0.99638	-1.01941	0.996416	1.770751	0.430871	7.405269
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2.025	0.003364	1.069172	0.99638	1.007069	0.999303	1.404986	0.525424	1.998688
1.995577	0.003836	1.009577	0.998916	1.048811	0.983253	1.458281	0.476735	2.178084
1.919294	0.295171	1.10946	0.996436	2.350789	0.761493	1.234272	0.924716	1.991517
1.886762	0.063522	1.105769	0.99638	1.144138	0.968628	1.333969	0.750762	2.257399
1.661948	0.129773	1.020492	0.998348	1.157974	0.961363	1.349342	0.725086	2.100011
1.795295	0.076066	1.060823	0.99638	1.148377	0.964609	1.342206	0.729963	2.124468
1.857232	0.055101	1.110791	0.99638	1.158928	0.95919	1.289537	0.771231	2.149332
2.293108	0.00205	1.124903	0.99638	1.04188	0.988242	-1.0862	0.937553	-4.42692
2.414806	0.001739	1.192811	0.99638	-1.02223	0.994681	-1.18571	0.837237	-4.89249
2.47784	0.00207	1.20856	0.99638	1.005808	0.999392	-1.12158	0.913006	-4.80458
2.529068	0.001455	1.221677	0.99638	1.033304	0.992123	-1.22113	0.807498	-4.77102
2.386203	0.001857	1.169249	0.99638	1.019118	0.995409	-1.1144	0.913376	-4.60006
1.426973	0.579309	-1.6268	0.99638	-1.30801	0.955745	-1.22266	0.923584	-7.29804
1.384002	0.593335	-1.64375	0.99638	-1.29895	0.95401	-1.23048	0.912844	-6.77394
1.424701	0.567153	-1.48763	0.99638	-1.2906	0.95702	-1.21048	0.92544	-6.9303
1.89587	0.348292	-1.10208	0.997224	-3.1014	0.642801	2.10843	0.620034	-1.29439
2.425566	0.003005	-1.40364	0.99638	-1.19899	0.942168	1.162106	0.875507	1.281522
2.86633	0.002847	-1.44138	0.99638	-1.19968	0.952901	1.235918	0.839906	1.378886
2.364646	0.002571	-1.38945	0.99638	-1.15026	0.954361	1.167343	0.860889	1.28158
1.208986	0.708397	-1.05587	0.997224	-1.18479	0.966454	-1.40238	0.764204	-9.43396
1.205689	0.732891	-1.08506	0.99638	-1.25775	0.953089	-1.42756	0.7689	-10.7306
1.185129	0.734979	-1.14867	0.99638	-1.24105	0.95208	-1.40885	0.752217	-9.55625
1.209623	0.724289	-1.15277	0.99638	-1.11609	0.98064	-1.39944	0.782211	-10.0431
1.233117	0.693885	-1.1488	0.99638	-1.21527	0.9627	-1.45559	0.747981	-11.1379
1.394201	0.452578	-1.23313	0.99638	-1.90817	0.715316	-1.44747	0.719807	-14.0329
1.332455	0.519919	-1.26314	0.99638	-1.82998	0.737741	-1.31956	0.80492	-11.3179
2.942506	8.00E-06	1.316861	0.99638	1.083733	0.970179	1.380674	0.497894	1.488829
1.807011	0.093698	1.19197	0.99638	-1.24194	0.941364	-1.39494	0.710313	-10.4738
1.634817	0.155541	1.098303	0.99638	-1.25024	0.933036	-1.33528	0.74661	-9.58185

1.580264	0.20127	1.144197	0.99638	-1.34522	0.906891	-1.36996	0.725086	-9.56863
4.027794	0.000375	1.256453	0.99638	1.016909	0.998118	1.743936	0.510218	2.562487
4.2288	0.000155	1.327961	0.99638	1.015212	0.998401	1.636137	0.545886	2.375118
4.124325	0.000241	1.240273	0.99638	1.130985	0.97284	1.739143	0.499879	2.618812
1.914398	0.061041	1.267661	0.99638	-1.46195	0.856248	2.032783	0.367356	3.310304
1.847189	0.086112	1.221452	0.99638	-1.4512	0.866908	2.165775	0.354631	3.565648
1.733232	0.118452	1.193345	0.99638	-1.45872	0.859428	2.259997	0.330322	3.634678
2.957922	0.001224	-1.02779	0.997421	-1.23022	0.939409	1.509479	0.591006	2.640283
2.845216	0.001494	-1.01002	0.999107	-1.31695	0.908952	1.566102	0.539133	2.593248
2.368308	0.000973	-1.0423	0.997224	-1.17137	0.941364	1.485633	0.487919	1.936183
2.716322	0.001502	-1.01427	0.998916	-1.23239	0.932537	1.499951	0.568391	2.402261
2.938435	0.001249	1.016485	0.998628	-1.21759	0.944119	1.547779	0.557406	2.594289
3.383558	0.000923	1.214092	0.99638	1.085432	0.981388	1.426988	0.695834	3.300984
1.499658	0.15552	-1.20797	0.99638	1.069397	0.980882	1.398517	0.608375	3.206956
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2.721048	0.003627	1.11548	0.99638	1.077422	0.982762	1.046905	0.976406	1.193307
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2.300077	0.028871	-1.19712	0.99638	-1.10889	0.977699	-1.1001	0.952647	-4.40639
2.335775	0.096261	2.705242	0.99638	2.925636	0.54832	2.966057	0.354631	4.455002
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1.635385	0.129354	-1.17378	0.99638	1.075772	0.981388	1.961198	0.356827	2.453906
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1.220906	0.582953	-1.03055	0.997224	-1.89181	0.602773	2.357444	0.304195	4.352958
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4.186584	0.005167	1.001	0.999606	-1.12938	0.980882	2.601595	0.403857	6.208998
1.383315	0.352112	-1.06101	0.99638	1.090745	0.977699	1.948783	0.364554	3.356291
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1.909739	0.001289	1.005972	0.999107	1.023902	0.991205	1.621228	0.323412	2.685467

1.79577	0.029258	1.055319	0.99638	1.176244	0.94354	1.354105	0.636873	2.500926
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1.102025	0.675319	-1.10907	0.99638	-1.0588	0.97639	1.601618	0.325084	3.447186
2.748736	0.00063	1.199867	0.99638	-1.08536	0.976397	1.125552	0.907639	1.272596
2.808652	0.001248	1.153529	0.99638	-1.13129	0.968628	1.215796	0.83354	1.373135
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6.341071	2.60E-05	1.356821	0.99638	1.352285	0.920534	1.828113	0.49842	2.109433
5.680775	6.00E-05	1.224251	0.99638	1.441488	0.891969	1.86062	0.489042	2.15458
6.060422	3.60E-05	1.24752	0.99638	1.410822	0.905603	1.869389	0.48459	2.17524
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1.91016	0.002068	1.059297	0.99638	1.190925	0.909025	1.40112	0.46532	2.465745
1.825067	0.001719	1.06053	0.99638	1.102921	0.952978	1.31145	0.523486	2.368818
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1.701052	0.060558	1.354853	0.99638	1.91752	0.501	1.513805	0.512777	4.106996
1.210704	0.670232	1.128791	0.99638	1.11658	0.97639	1.691725	0.535924	3.814638
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1.702612	0.012542	1.038947	0.99638	-1.06396	0.97639	1.650482	0.330322	3.355945
1.972918	0.065123	1.175358	0.99638	-1.17481	0.96296	1.809074	0.471639	2.705105
2.216747	0.035054	1.289178	0.99638	-1.13983	0.972744	1.805786	0.485602	2.748431
2.665501	0.000312	-1.27333	0.99638	-1.28606	0.881284	1.532857	0.46426	2.08064
2.374822	0.001344	-1.40087	0.99638	-1.34575	0.852867	1.574985	0.442458	2.048073
2.478225	0.000988	-1.35969	0.99638	-1.27184	0.896355	1.63374	0.417095	2.182295
2.003195	0.014046	1.118034	0.99638	1.415303	0.830144	1.568254	0.477645	3.26308
2.459846	0.000302	1.004023	0.999559	-1.13038	0.953089	1.364504	0.570303	1.788864
2.262145	0.005884	1.154291	0.99638	-1.03195	0.99251	1.635229	0.45906	3.895151
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6.673254	5.60E-05	1.415402	0.99638	1.238111	0.954393	1.881239	0.519542	2.449138
6.814322	6.20E-05	1.321593	0.99638	1.286429	0.948339	1.899031	0.52216	2.56178
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-4.76045	0.004414	-1.53882	0.99638	-3.23056	0.54516	-1.07129	0.97761	-5.10924
-4.21932	1.80E-05	-1.3231	0.99638	-1.08483	0.977699	-2.11768	0.319528	-1.63126
-4.0858	2.80E-05	-1.33526	0.99638	-1.04616	0.98839	-2.26408	0.304195	-1.69577
1.538585	0.081707	-1.02038	0.997621	-1.13485	0.953089	1.598988	0.393953	2.84235
-1.21056	0.485743	1.07667	0.99638	-1.21701	0.914171	-1.04105	0.969519	-4.4537
1.4746	0.1746	-1.21711	0.99638	-1.02577	0.993795	1.746123	0.378225	2.624062
1.69513	0.079423	-1.10246	0.99638	-1.08526	0.977699	1.636833	0.461541	2.720713

2.107837	0.007105	1.018159	0.998148	-1.13989	0.95702	1.143809	0.884154	1.715929
-1.21765	0.900664	3.562997	0.99638	1.770151	0.956012	5.965636	0.498779	4.674112
-1.26575	0.878694	3.429905	0.99638	1.738575	0.95702	6.037145	0.489446	4.654256
-1.25581	0.884964	3.519175	0.99638	1.713145	0.95919	6.106218	0.494681	4.57897
-1.2436	0.884025	3.433751	0.99638	1.766911	0.953435	5.778863	0.485381	4.471882
-1.33008	0.857806	3.660289	0.99638	1.801493	0.955745	6.770835	0.482004	5.103173
-1.58521	0.137348	-1.31013	0.99638	-1.40745	0.852867	-1.58056	0.499456	-4.04402
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1.000528	0.99887	1.124947	0.99638	1.05439	0.980754	-1.39799	0.488593	-3.30903
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-1.63729	0.297471	-1.00844	0.999492	-1.2764	0.950417	-1.35319	0.814324	-9.71872
-1.62651	0.295946	1.01616	0.998916	-1.26806	0.950468	-1.32528	0.828605	-9.4961
-1.60101	0.333235	1.00262	0.999559	-1.29803	0.947387	-1.45256	0.760223	-10.281
2.475055	0.588476	-1.09298	0.998348	1.927	0.959495	-1.84572	0.903767	-1.80146
2.400229	0.586704	-1.10391	0.997621	1.915843	0.957627	-1.71271	0.915793	-1.74384
2.480917	0.579782	-1.13555	0.997224	1.87774	0.961974	-1.78275	0.909387	-1.75407
2.598972	0.55433	-1.07585	0.998628	1.886656	0.960724	-1.8334	0.901848	-1.83852
2.361568	0.59432	-1.27726	0.996597	1.843958	0.96296	-1.69626	0.917811	-1.68077
2.657764	0.000195	-1.01551	0.998348	-1.13534	0.953347	1.197848	0.798919	1.613037
1.00186	0.99542	1.094326	0.99638	-1.17466	0.914823	-1.13387	0.832846	-3.66204
1.011268	0.969223	1.141837	0.99638	-1.20942	0.888476	-1.20708	0.720879	-3.61876
1.057082	0.835278	1.142128	0.99638	-1.19139	0.908743	-1.22329	0.700058	-3.65708
3.640099	0.000626	1.053525	0.997224	1.074339	0.983771	1.9318	0.423323	3.265958
3.604229	0.000615	1.03892	0.997224	1.111008	0.97639	1.919068	0.423323	3.231257
3.659588	0.000607	1.055316	0.997224	1.08156	0.982762	1.932041	0.423323	3.273463
3.40432	0.001165	-1.04189	0.997224	1.129362	0.973185	1.994968	0.403857	3.320671
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1.448761	0.063764	1.089815	0.99638	1.342685	0.75584	1.479869	0.386043	2.296339
1.452858	0.048335	1.089856	0.99638	1.308149	0.775024	1.494787	0.356638	2.371852
2.671434	0.000836	-1.01933	0.99788	-1.07991	0.977699	1.907099	0.345233	2.301973
2.617413	0.000901	-1.0597	0.99638	-1.08751	0.97639	1.895905	0.342664	2.260781
2.831676	0.00036	-1.02795	0.997224	-1.04848	0.987463	1.732737	0.386287	2.125473
2.472018	0.001189	-1.11935	0.99638	1.027895	0.993406	1.895554	0.330322	2.389477
2.652	0.000711	-1.02661	0.997224	-1.037	0.990729	1.80316	0.356827	2.191159
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1.721964	0.063513	-1.14366	0.99638	-1.20462	0.938043	1.286646	0.743495	2.548148
1.468307	0.171786	1.065919	0.99638	1.362469	0.851792	1.786085	0.356638	4.435016

1.22498	0.651369	-1.94394	0.99638	-1.90344	0.676413	1.712122	0.526876	4.067039
1.602554	0.012402	-1.18096	0.99638	-1.46413	0.571486	1.242162	0.629328	2.151442
1.726016	0.020233	1.05346	0.99638	-1.01429	0.996416	1.169691	0.819289	-3.49992
1.726824	0.017201	1.020831	0.997224	1.008641	0.998674	1.190658	0.783059	-3.52279
2.091028	0.000846	1.114373	0.99638	1.203881	0.905476	1.409613	0.476051	2.256879
1.234411	0.402121	1.159014	0.99638	-1.00161	0.999969	-1.24834	0.704746	-4.57037
1.132042	0.646607	1.104378	0.99638	-1.04304	0.985152	-1.17506	0.804434	-4.26223
1.167794	0.581645	1.143398	0.99638	-1.02428	0.993795	-1.24105	0.73325	-4.60966
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3.366173	3.20E-05	-1.16073	0.99638	-1.20208	0.930124	1.233919	0.771231	1.503207
3.104387	0.000105	-1.20446	0.99638	-1.17668	0.944844	1.339566	0.663442	1.61526
3.128157	9.80E-05	-1.23972	0.99638	-1.17412	0.945627	1.324262	0.681676	1.56046
3.177526	9.90E-05	-1.21191	0.99638	-1.18917	0.940931	1.324858	0.687608	1.601873
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4.397071	0.000423	1.018347	0.998916	1.494249	0.8754	1.845075	0.497727	3.5178
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1.680442	0.024131	1.422835	0.99638	1.12539	0.953089	1.723363	0.330322	3.910618
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2.472328	0.07699	1.46462	0.99638	1.539809	0.909025	1.699263	0.674168	2.657507
2.626047	0.063194	1.542201	0.99638	1.500033	0.917476	1.630505	0.714259	2.576151
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1.940232	0.005913	1.116437	0.99638	1.085264	0.972744	1.521556	0.434003	3.117706
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5.19138	0.00045	-1.26737	0.99638	-1.6711	0.850703	1.080409	0.968099	-1.1607
-1.22483	0.429844	-1.11475	0.99638	-1.31295	0.844027	-1.53386	0.413712	-3.12992
1.154484	0.642058	-1.23387	0.99638	-1.48656	0.743693	-1.40457	0.571493	-4.35403
1.128709	0.705072	-1.21695	0.99638	-1.52701	0.718835	-1.33353	0.65305	-4.39879
2.833965	0.002018	1.241454	0.99638	1.067686	0.983771	1.912024	0.389846	3.925646
-1.27646	0.405989	-1.33177	0.99638	-1.17084	0.945308	1.150042	0.871272	-4.48119
2.305187	0.002252	1.171969	0.99638	1.392856	0.830144	1.377892	0.615457	2.488827
2.18715	0.004103	-1.05018	0.99638	1.024052	0.993795	1.532401	0.481737	2.795368
2.277459	0.003874	-1.05293	0.99638	1.06658	0.981388	1.478499	0.540486	2.670832
1.476088	0.096085	-1.16055	0.99638	-1.00961	0.998401	1.459021	0.464987	2.819664
1.456369	0.103209	-1.16035	0.99638	-1.08057	0.972744	1.424486	0.488515	2.757359
1.493722	0.106169	-1.1244	0.99638	-1.02226	0.993795	1.470562	0.482539	2.878622
1.356925	0.194901	-1.18528	0.99638	-1.04619	0.983671	1.532547	0.403857	2.918389
1.584431	0.04703	-1.08282	0.99638	-1.03089	0.990728	1.364395	0.555587	2.657213
1.63225	0.005656	-1.0124	0.997621	1.18583	0.881284	1.467484	0.354631	2.403884
-1.23344	0.518011	1.023612	0.997621	-1.14378	0.95702	-1.11072	0.922181	-4.30678
1.161227	0.569754	1.259707	0.99638	-1.04755	0.983004	-1.29072	0.640637	-4.8279
1.312067	0.311596	1.364633	0.99638	1.010719	0.998401	-1.38747	0.572169	-5.23338
1.638275	0.035015	-1.30256	0.99638	-1.18071	0.928109	1.440104	0.487919	3.462049
1.75955	0.021784	-1.28159	0.99638	-1.15271	0.947387	1.338552	0.619122	3.172503
1.607748	0.036704	-1.28022	0.99638	-1.18619	0.922678	1.462948	0.457018	3.378695
1.691612	0.0308	-1.29901	0.99638	-1.14723	0.948726	1.343529	0.605526	3.333244
1.646964	0.036085	-1.28798	0.99638	-1.12921	0.953347	1.415406	0.517561	3.430532
4.357907	0.003994	-1.04146	0.997621	1.165191	0.976351	1.467765	0.78425	1.147323
4.429726	0.003302	-1.03692	0.997621	1.203957	0.97081	1.463767	0.78323	1.139025
4.489029	0.002968	-1.00784	0.999559	1.141452	0.977914	1.447297	0.792377	1.12629
4.493822	0.003104	-1.02002	0.998916	1.129481	0.980754	1.426623	0.80492	1.095718
4.768992	0.002431	1.058011	0.997224	1.141773	0.978655	1.306736	0.870032	1.061157
2.531917	0.000916	1.029403	0.997224	1.04566	0.987463	1.515911	0.496742	3.088028
2.469979	0.000732	1.070457	0.99638	-1.00281	0.999969	1.486828	0.496281	2.853157
2.453518	0.001381	1.048659	0.996891	1.019872	0.995396	1.579934	0.459196	3.307704
2.468376	0.000999	1.046347	0.997102	1.025143	0.993795	1.527115	0.480129	3.186724
2.533409	0.000411	1.092457	0.99638	1.011873	0.99792	1.463296	0.49966	2.91686
4.645183	0.001089	1.216913	0.99638	1.104888	0.982762	2.693692	0.354631	5.274001
1.80044	0.020687	-1.16643	0.99638	-1.18735	0.932537	1.513546	0.46532	1.956059
1.776019	0.070078	1.076394	0.99638	-1.11372	0.972744	1.619868	0.496261	3.418842
2.107796	0.020924	1.048463	0.997224	-1.04648	0.989538	1.701849	0.46371	3.252348
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2.441362	0.002293	-1.07051	0.99638	1.004622	0.999765	1.823983	0.363237	2.262019

1.86158	0.013722	-1.02944	0.997224	1.077897	0.97639	1.703283	0.356827	3.03909
1.770105	0.019776	1.024699	0.997224	1.066608	0.977914	1.749884	0.341025	3.081217
1.799091	0.009432	-1.06305	0.99638	1.114926	0.956301	1.649797	0.354021	2.977115
1.905964	0.007426	1.042979	0.996637	1.042282	0.987463	1.613229	0.381104	2.883897
1.866473	0.009286	1.028683	0.997224	1.046398	0.984404	1.647693	0.362585	2.962452
1.798651	0.113117	1.197551	0.99638	1.685292	0.770311	1.413915	0.711948	3.937387
1.79902	0.107815	1.218891	0.99638	1.72547	0.744973	1.487733	0.648802	4.232499
1.822693	0.109678	1.197508	0.99638	1.856036	0.693785	1.475406	0.671176	4.512508
3.012113	0.000603	1.061935	0.99638	1.102608	0.975573	1.557211	0.525897	3.523622
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1.388573	0.337967	-1.08958	0.99638	-1.80205	0.625744	1.400664	0.667694	2.563514
1.529581	0.212251	-1.02418	0.997621	-1.86693	0.606975	1.248043	0.815816	2.225633
1.475244	0.284079	-1.03553	0.997224	-1.9149	0.608233	1.33338	0.752462	2.605906
1.45926	0.284573	-1.04153	0.997224	-1.87849	0.608233	1.334862	0.741812	2.500103
1.468532	0.294215	-1.04678	0.997224	-1.89719	0.62431	1.34258	0.746832	2.578811
2.711152	0.005245	-1.00097	0.999559	1.00492	0.999835	2.044997	0.377978	3.64579
1.819434	0.019647	-1.10418	0.99638	-1.07159	0.977699	1.666446	0.381104	2.227367
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1.712459	0.012231	-1.00697	0.999103	1.203039	0.906234	1.222858	0.717032	2.474511
1.883488	0.008514	1.05203	0.99638	1.239004	0.897153	1.241933	0.72869	2.837784
1.943055	0.00596	1.072516	0.99638	1.285701	0.8678	1.176962	0.815169	2.734542
1.003595	0.993846	-1.07051	0.99638	-1.0757	0.980754	-1.03183	0.982336	5.279019
1.04519	0.911433	-1.07435	0.99638	-1.02894	0.993795	-1.08515	0.94599	5.205424
1.084308	0.832675	1.004186	0.999559	-1.02689	0.993795	-1.07659	0.952642	5.490208
1.077197	0.845351	1.009565	0.999103	-1.02511	0.994233	-1.06453	0.959962	5.496788
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3.45421	0.001625	1.227342	0.99638	1.490957	0.868991	1.714381	0.537396	4.337638

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1.333057	0.193735	-1.10933	0.99638	-1.13067	0.947706	1.039833	0.966589	3.281863
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1.283303	0.29838	-1.14902	0.99638	1.025958	0.992218	1.156697	0.828079	3.793069
1.408518	0.151144	-1.04058	0.997005	-1.00851	0.998881	1.026793	0.980527	3.541669
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2.611762	0.015193	1.483852	0.99638	-1.03484	0.993899	2.125339	0.396031	2.315826
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2.843392	0.019119	1.116928	0.99638	1.171828	0.972571	2.353505	0.393535	8.392391
1.420256	0.602006	1.709812	0.99638	1.822045	0.86781	3.476876	0.354631	24.98353
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5.303672	5.30E-05	1.056321	0.997224	1.073994	0.984825	1.775447	0.499456	1.864785
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4.146931	7.00E-06	1.488967	0.99638	1.495884	0.761493	1.289569	0.72197	1.072371
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7.990586	0.005029	2.005448	0.99638	2.432496	0.835821	3.770357	0.423323	7.772308
8.112211	0.00406	2.105243	0.99638	2.401492	0.832926	3.558402	0.433806	6.952082
7.797565	0.005735	1.929666	0.99638	2.511946	0.826141	3.777999	0.423709	7.593453
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7.953971	0.004989	1.974227	0.99638	2.362833	0.844027	3.658994	0.431828	7.224116
2.639163	0.00024	1.345665	0.99638	1.324975	0.852867	1.548165	0.437752	3.59609
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1.176454	0.565684	1.025215	0.997224	-1.04152	0.987463	1.05049	0.962735	4.047023
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1.093359	0.778405	-1.01693	0.99788	-1.01218	0.997781	1.144803	0.865994	4.680267
1.169237	0.586139	-1.00553	0.999492	-1.05889	0.981388	1.06767	0.94835	4.442984
3.980107	0.015442	1.729994	0.99638	2.020691	0.829804	1.611001	0.754937	1.749922
3.141877	0.002664	1.191057	0.99638	1.341503	0.917659	1.753245	0.506041	7.389252
-1.45414	0.110128	-1.14699	0.99638	-1.32051	0.836864	1.001722	0.999432	-2.79997
-1.56508	0.04254	-1.22832	0.99638	-1.26254	0.865117	1.052815	0.95688	-2.75664
-1.41644	0.135555	-1.14026	0.99638	-1.26818	0.8678	-1.02522	0.981182	-2.94031
-1.38656	0.158748	-1.11754	0.99638	-1.31226	0.836864	-1.09131	0.915994	-2.89194
-1.50738	0.058116	-1.19529	0.99638	-1.28948	0.841453	1.01667	0.988175	-2.87593
-4.75923	1.20E-05	-1.46379	0.99638	-1.80382	0.61941	-1.44111	0.627802	-1.20554
1.762383	0.036898	1.219196	0.99638	1.332637	0.865117	1.86454	0.340599	3.177002
1.918439	0.036856	1.298773	0.99638	1.238637	0.931152	1.968197	0.354631	3.48731
1.8242	0.040882	1.26567	0.99638	1.311339	0.889831	1.933407	0.347771	3.279369
1.892192	0.037192	1.302426	0.99638	1.246455	0.928109	1.72726	0.428401	3.004125
1.855238	0.024648	1.278588	0.99638	1.294952	0.888476	1.820274	0.354631	3.08594
3.67419	0.001213	1.676462	0.99638	1.261905	0.945205	1.996524	0.433311	4.071628
-1.42714	0.103066	-1.07986	0.99638	-1.1277	0.94922	-2.01287	0.259154	-3.66786
-1.50581	0.058618	-1.07488	0.99638	-1.06577	0.97639	-1.89414	0.262046	-3.5526
-1.70409	0.040157	-1.15806	0.99638	-1.10098	0.97081	-2.22348	0.262046	-4.40005
-1.49576	0.055619	-1.11954	0.99638	-1.07464	0.972744	-1.97084	0.262046	-3.59292
2.931715	0.00078	1.194313	0.99638	1.384638	0.867742	1.304944	0.74662	2.643518
3.154239	0.000311	1.291217	0.99638	1.325248	0.889831	1.266766	0.776372	2.589757
-136.06	2.00E-06	-7.69713	0.99638	-5.88365	0.56674	-1.28594	0.943114	1.085045
-132.876	2.00E-06	-7.57235	0.99638	-5.4817	0.583194	-1.4073	0.913294	-1.00318
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-128.189	3.00E-06	-7.18057	0.99638	-5.82939	0.571486	-1.49091	0.894195	-1.08982
-154.241	1.00E-06	-7.81827	0.99638	-5.49895	0.575589	-1.16194	0.96771	1.193776
3.097807	8.90E-05	-1.05447	0.99638	-1.01393	0.997054	1.654333	0.40462	2.002597
2.909174	0.000232	-1.09704	0.99638	-1.072	0.979794	1.687092	0.398693	2.063972
2.008049	0.278369	1.102807	0.997224	-3.84882	0.522732	1.56542	0.793802	-5.45632
-2.07376	0.009349	-1.15801	0.99638	-1.14794	0.954393	-1.20093	0.823922	-2.71606
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-1.96622	0.018179	-1.11225	0.99638	-1.16756	0.950497	-1.27659	0.747689	-2.88931
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-1.72426	0.156186	-1.13722	0.99638	-1.63677	0.812509	-2.35525	0.341025	-5.10422
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-1.73195	0.150771	-1.07916	0.99638	-1.65671	0.796844	-2.25107	0.354631	-4.85098
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3.866143	0.001109	1.094042	0.99638	-1.01787	0.998267	1.175389	0.912095	1.862934
4.802062	0.001563	1.141458	0.99638	-1.01182	0.99934	1.240715	0.898673	2.253769
4.676292	0.001853	1.183388	0.99638	-1.01091	0.999353	1.296263	0.86749	2.29897
3.329754	0.000873	-1.27095	0.99638	-1.55837	0.822279	-1.09031	0.953257	1.358266
3.427156	0.000717	-1.32419	0.99638	-1.4277	0.872552	-1.12319	0.932822	1.309016
3.289606	0.001775	-1.36557	0.99638	-1.47967	0.867742	-1.06829	0.967621	1.40867
3.26887	0.001457	-1.37531	0.99638	-1.45835	0.868991	-1.0559	0.972194	1.350575
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-3.49151	0.000125	-1.66749	0.99638	-1.23634	0.929971	-1.53731	0.535718	-2.28077
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1.203178	0.50441	-1.08148	0.99638	-1.12246	0.95702	-1.16046	0.839883	-4.89391
1.106762	0.703541	-1.09622	0.99638	-1.14709	0.940931	-1.11309	0.883985	-4.35515
1.318512	0.552797	1.118695	0.99638	-1.65575	0.826446	1.83425	0.504712	5.497715
8.023277	6.10E-05	1.73224	0.99638	1.246129	0.95919	1.620565	0.691169	4.593308
7.720464	1.00E-04	1.657707	0.99638	1.314017	0.94953	1.694736	0.661902	4.65704
7.632401	0.000123	1.692848	0.99638	1.285892	0.953508	1.763389	0.632339	5.113122
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3.225443	0.008224	-1.16984	0.99638	-1.15805	0.973013	1.719896	0.602047	3.895708
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4.968451	0.000352	1.988092	0.99638	1.86562	0.763859	1.846273	0.525356	1.790617
1.224095	0.804304	1.117438	0.996784	-3.72002	0.556282	1.191036	0.946248	-3.21131
1.03015	0.942353	-1.01577	0.998628	-1.25994	0.917659	-1.44922	0.593746	-5.50067
1.014811	0.97251	-1.01243	0.998916	-1.34606	0.872552	-1.45998	0.579663	-5.55206
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1.046316	0.907689	-1.0115	0.998916	-1.37014	0.862891	-1.58424	0.482155	-5.98924
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1.13223	0.759807	-1.01652	0.998628	-1.29415	0.917137	-1.8056	0.421362	-8.52665
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1.979439	0.000131	1.124779	0.99638	-1.0906	0.953029	-1.31304	0.468679	-4.16925
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1.679873	0.030961	1.133907	0.99638	1.360524	0.821778	1.398353	0.538013	4.005172
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1.247112	0.370812	-1.04578	0.99638	-1.17309	0.928191	1.198671	0.769055	3.219211
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1.257354	0.338216	-1.07899	0.99638	-1.15671	0.934191	1.195298	0.767175	3.181633
1.251613	0.378929	-1.08426	0.99638	-1.15406	0.942897	1.180921	0.803477	3.159089
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1.6262	0.464904	-1.28693	0.99638	-4.05637	0.481288	-1.90692	0.657259	-1.74436
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1.580755	0.048113	1.015275	0.998083	1.224281	0.902733	1.514203	0.425282	2.903448
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-1.58584	0.061492	-1.2519	0.99638	1.058396	0.981388	1.896283	0.304531	6.228701
-1.50727	0.10909	-1.16877	0.99638	1.092181	0.972744	1.955369	0.304531	6.61911
-1.18857	0.567898	-1.0705	0.99638	-1.26203	0.897153	-1.57236	0.440879	-4.14817
-2.40577	0.057235	-1.96351	0.99638	-1.991	0.751216	1.709351	0.625198	1.701652
-2.25377	0.082967	-1.86556	0.99638	-1.99594	0.753629	1.611749	0.681543	1.649224
1.594578	0.139184	1.143894	0.99638	1.313492	0.898793	1.757365	0.417358	5.230613
1.469836	0.230564	1.045221	0.997224	1.297467	0.909025	1.936674	0.354631	5.712174
1.57468	0.152799	1.126593	0.99638	1.281749	0.916061	1.744171	0.424018	5.097241
1.641005	0.124288	1.113657	0.99638	1.241409	0.931275	1.694753	0.459023	5.084581
1.543032	0.17378	1.047446	0.997224	1.348558	0.881284	1.85056	0.381104	5.409922
2.571041	0.000417	-1.04158	0.997224	-1.18018	0.936	1.165394	0.844534	1.528403

-4.84231	0.000247	-1.85839	0.99638	-1.60841	0.845221	-1.59671	0.631982	-2.79375
-5.01809	0.000228	-1.92366	0.99638	-1.67031	0.829804	-1.62396	0.625188	-2.87706
-6.93872	1.40E-05	-1.77818	0.99638	-1.11859	0.976898	-1.03701	0.985179	1.915904
-6.42939	7.00E-06	-1.78272	0.99638	-1.08222	0.982762	-1.04163	0.980778	1.89472
-1.01402	0.976234	1.039834	0.997224	-1.05539	0.987202	-1.07556	0.941342	-4.07312
13.88191	1.00E-06	2.388548	0.99638	1.560823	0.865031	1.058488	0.976199	-3.33
2.051631	0.0422	-1.04823	0.997224	-1.12255	0.973399	1.199042	0.873931	2.241385
-2.36342	0.191499	-1.89452	0.99638	-1.97025	0.864446	1.211534	0.940084	1.850987
-1.2601	0.725086	-1.13389	0.99638	-1.80217	0.856709	-1.82676	0.639834	-24.2431
3.11575	0.000615	-1.32739	0.99638	-1.57962	0.773398	1.268494	0.791332	-1.07913
1.051202	0.973134	1.058768	0.998526	2.835623	0.871741	2.409762	0.745056	3.986848
1.058663	0.968755	1.035745	0.999103	2.874796	0.8678	2.407471	0.741904	4.03094
-3.29287	0.191344	-1.50268	0.99638	1.242586	0.98064	-1.60791	0.865151	-1.21097
-2.04905	0.037192	-1.06078	0.997005	-1.30568	0.917659	-1.37972	0.717357	-4.487
-3.05428	0.002396	-1.96107	0.99638	-1.93667	0.628044	-1.79589	0.472012	-2.69804
8.800777	0.000305	1.258629	0.99638	1.14791	0.980882	1.894865	0.644635	3.066507
-4.17831	8.00E-06	-1.33079	0.99638	-1.08485	0.97639	-1.37056	0.638595	1.266195
-4.3199	2.60E-05	-1.46263	0.99638	-1.66526	0.718583	-1.36664	0.697549	-1.23866
2.114399	0.252327	-1.38984	0.99638	1.612843	0.918069	1.369582	0.877278	1.67198
-6.97465	0.000262	-2.19933	0.99638	-1.05425	0.992549	-1.99736	0.403857	1.289366
-8.50956	0.006755	-1.95204	0.99638	-1.15242	0.98701	-1.90616	0.519909	1.251247
-7.25165	0.009124	-1.812	0.99638	-1.02133	0.99934	-1.8862	0.510984	1.257131
-7.42967	1.30E-05	-1.66546	0.99638	-1.07753	0.986307	-1.92616	0.434003	1.213788
-7.46978	0.000374	-1.84321	0.99638	-1.00856	0.999765	-1.91355	0.46426	1.232571
1.658637	0.166201	1.114902	0.99638	1.639444	0.786515	1.478551	0.649205	1.964889
3.218353	0.000953	1.259503	0.99638	1.268395	0.930564	1.643767	0.522546	6.878606
3.152988	0.000745	1.299413	0.99638	1.27082	0.927047	1.61306	0.521686	6.058818
3.143251	0.001165	1.229931	0.99638	1.325564	0.914168	1.704135	0.489446	6.148951
2.203691	0.542973	-1.26817	0.99638	-3.80001	0.841453	1.15634	0.97712	-1.28118
2.217531	0.537916	-1.24791	0.99638	-4.0457	0.827652	1.128611	0.981765	-1.31537
2.08781	0.589538	-1.33877	0.99638	-3.98389	0.841453	1.212229	0.969651	-1.1943
1.854686	0.643572	-1.31201	0.99638	-3.94578	0.832282	1.148703	0.978007	-1.06112
1.822266	0.659828	-1.34421	0.99638	-4.02108	0.832444	1.173951	0.975038	-1.00323
1.152589	0.521703	-1.09079	0.99638	1.06222	0.976158	-1.09468	0.89165	-4.77738
1.108892	0.664076	-1.09055	0.99638	1.058819	0.976397	-1.0368	0.966846	-4.56018
1.151755	0.561369	-1.04196	0.99638	1.11582	0.953029	-1.04814	0.958573	-5.00745
1.141453	0.534508	-1.07142	0.99638	1.064428	0.97284	-1.05142	0.947704	-4.40407
1.225646	0.404862	-1.03281	0.997224	1.091948	0.968628	-1.12841	0.863664	-5.25874
-3.03783	0.043707	-1.81143	0.99638	-1.54167	0.917476	-3.33638	0.338483	-6.03261
6.516962	1.00E-05	2.125965	0.99638	1.223573	0.95064	1.187105	0.893958	1.371009
5.065578	6.00E-06	2.038143	0.99638	1.24034	0.929971	1.159787	0.88763	1.300917
-2.14983	0.009326	-1.19345	0.99638	-1.16094	0.953435	-1.7388	0.403203	-3.39661
-1.15257	0.874835	-4.73379	0.99638	-1.98329	0.872552	-2.47264	0.56126	-2.32575
2.565741	0.202545	1.306123	0.99638	2.67416	0.792223	1.718846	0.78323	2.368687
2.199155	0.217705	1.25571	0.99638	2.566255	0.741915	1.721062	0.734823	2.239433
2.430793	0.183977	1.246556	0.99638	2.537866	0.766597	1.640662	0.780654	2.160518
2.098668	0.247907	1.220046	0.99638	2.452781	0.759367	1.699972	0.741461	2.046199

2.203933	0.206626	1.289162	0.99638	2.45034	0.753629	1.673134	0.746754	2.000893
10.49424	0	1.924593	0.99638	1.312914	0.917661	1.180277	0.889334	-3.24796
5.682758	4.00E-06	1.90612	0.99638	1.449506	0.846611	-1.04973	0.971993	1.194645
2.313917	0.00915	1.16261	0.99638	1.011334	0.998935	1.520031	0.571746	3.725244
2.162379	0.014229	1.110986	0.99638	1.040316	0.991091	1.532231	0.549211	3.812824
1.390657	0.287571	-1.00266	0.999559	1.058119	0.983771	-2.04011	0.324839	-3.76543
1.33414	0.339387	-1.02996	0.997224	1.04271	0.988242	-1.95132	0.330322	-3.58295
1.295342	0.427085	-1.03713	0.997224	-1.02003	0.995653	-2.00704	0.330322	-3.67394
1.310912	0.401447	-1.04984	0.997224	-1.01533	0.997054	-2.02498	0.330322	-3.80503
1.153413	0.835567	-2.36087	0.99638	-4.35234	0.3816	-1.9112	0.602047	1.251016
1.153282	0.8367	-2.48541	0.99638	-4.20282	0.396271	-1.9189	0.6018	1.175722
3.4317	0.368858	1.254407	0.99638	1.029857	0.99934	1.431749	0.943989	1.7231
-2.38287	0.003453	1.053735	0.99638	-1.03128	0.992829	-1.5342	0.519101	-2.99695
-2.35045	0.004091	-1.0144	0.998628	-1.00946	0.999303	-1.62833	0.461541	-3.08798
-2.23855	0.007319	1.061453	0.99638	-1.00995	0.999303	-1.62204	0.472012	-3.16535
-2.26927	0.007115	1.109091	0.99638	-1.06896	0.982616	-1.62589	0.475297	-3.24821
-2.2362	0.007193	1.063969	0.99638	-1.05215	0.987463	-1.66654	0.443571	-3.28271
7.723408	0.000249	1.297696	0.99638	1.302516	0.954195	1.805646	0.644333	2.748562
3.461473	4.10E-05	1.175928	0.99638	-1.02905	0.992974	1.403295	0.604469	1.72915
1.876829	0.006315	-1.27863	0.99638	-1.20387	0.914168	1.338128	0.586261	1.83823
2.20939	0.000597	1.164713	0.99638	-1.09167	0.968628	1.344313	0.563161	2.11721
6.188325	1.60E-05	2.023279	0.99638	1.420857	0.889421	1.115911	0.94274	-1.99888
-2.15774	0.002183	-1.10289	0.99638	1.089271	0.972744	1.768731	0.340599	4.434269
-4.09793	2.00E-06	-1.42503	0.99638	-1.04876	0.983771	-1.29545	0.67365	1.329899
-4.3536	8.40E-05	-1.47284	0.99638	1.005664	0.999765	-1.1079	0.941342	1.22245
-4.95097	3.90E-05	-1.58103	0.99638	-1.01906	0.996956	-1.05706	0.971198	1.335668
-6.26049	1.80E-05	-1.72502	0.99638	-1.28003	0.937137	-1.37068	0.761306	-1.01022
-5.64505	3.10E-05	-1.37631	0.99638	-1.19065	0.958512	-1.0651	0.968953	1.511272
17.93629	2.00E-06	3.0152	0.99638	1.656933	0.877377	1.146279	0.948015	-3.07175
-4.83145	1.00E-06	-1.74175	0.99638	-1.23216	0.914168	-1.09529	0.925606	1.597791
-4.67789	1.00E-06	-1.75061	0.99638	-1.19865	0.929397	-1.11479	0.905622	1.557843
-4.87104	2.00E-06	-1.47154	0.99638	-1.06347	0.981756	-1.16125	0.864641	1.526684
-1.15774	0.835069	-1.00223	0.999559	-1.30308	0.953029	1.15811	0.955475	-11.3659
-1.37758	0.755757	-1.04496	0.998526	-1.4124	0.957968	1.343535	0.925535	-7.109
-1.32558	0.770555	-1.00282	0.999559	-1.32037	0.960796	1.339724	0.918264	-8.53604
-1.40231	0.733182	-1.06491	0.997224	-1.57336	0.942367	1.328659	0.926552	-6.52322
-1.24441	0.828791	-1.01233	0.999492	-1.27307	0.97081	1.297556	0.931262	-8.19433
1.444991	0.330309	1.104915	0.99638	1.646749	0.777816	1.276746	0.80974	1.878336
-3.3963	7.00E-06	-1.01164	0.998628	1.055875	0.981388	-1.39193	0.539375	1.300092
-3.74917	3.00E-06	-1.00695	0.999107	-1.01847	0.995028	-1.20507	0.777432	1.374092
-2.54144	0.000365	1.000028	0.999979	-1.20905	0.920612	-1.58281	0.416951	-2.32457
-2.39305	0.000342	1.005506	0.999301	-1.14458	0.94707	-1.54464	0.40633	-2.25983
-2.53454	0.001097	-1.00575	0.999492	-1.14936	0.95397	-1.54129	0.487919	-2.27431
-2.54758	0.00053	1.025214	0.997224	-1.17706	0.940427	-1.63024	0.403857	-2.45449
-2.28726	0.000636	-1.00688	0.999107	-1.16669	0.933467	-1.52252	0.424191	-2.29519
4.511655	0.004537	1.371172	0.99638	1.762258	0.862924	4.440305	0.304195	3.720522
4.207459	0.005863	1.379197	0.99638	1.58782	0.897153	4.560093	0.282095	3.638425

4.475849	0.004492	1.291435	0.99638	1.612108	0.892197	4.280776	0.304195	3.48515
4.056856	0.005997	1.310608	0.99638	1.591718	0.890987	4.570278	0.262046	3.741755
3.850606	0.009238	1.336726	0.99638	1.523987	0.914168	4.611801	0.262046	3.673421
-3.98015	6.00E-06	-1.42169	0.99638	-1.04469	0.987463	-1.09603	0.928294	-1.05215
-2.65697	0.000453	-1.04286	0.997224	-1.11158	0.968628	-1.31202	0.687608	-1.7296
-1.77936	0.37146	-1.44038	0.99638	-1.56306	0.921943	1.066692	0.981191	1.650372
-1.47314	0.441914	-1.29498	0.99638	-1.28017	0.950417	1.137479	0.944461	1.501994
3.966803	0.000614	1.17143	0.99638	1.163915	0.968823	1.805514	0.497458	4.636441
2.84333	0.015984	1.628943	0.99638	1.692631	0.832926	1.214462	0.896754	2.486624
4.996858	0.001117	1.739919	0.99638	1.691691	0.859428	1.002743	0.99959	-1.98783
-5.58579	0	-1.29763	0.99638	-1.16056	0.944844	-1.12605	0.888239	1.741956
-2.12243	0.001268	-1.11011	0.99638	-1.14314	0.945784	-1.48526	0.439997	-2.19448
1.990249	0.702968	-1.38024	0.99638	2.151813	0.953089	1.368039	0.960608	-1.17432
1.966051	0.718006	-1.40496	0.99638	2.27736	0.951366	1.454107	0.953876	-1.08218
2.06985	0.690277	-1.33751	0.99638	2.358389	0.948482	1.320298	0.966589	-1.08913
2.017607	0.711225	-1.32997	0.99638	2.336378	0.950417	1.479797	0.952572	-1.12205
2.024388	0.714572	-1.40786	0.99638	2.385654	0.950417	1.425657	0.958428	-1.25977
2.257414	0.132736	2.734918	0.99638	3.164087	0.538367	3.417498	0.339379	5.463796
4.591993	1.00E-06	1.578468	0.99638	1.224348	0.917476	1.031366	0.97872	-2.73189
-1.45496	0.180406	-1.07235	0.99638	-1.20018	0.932537	-1.72684	0.377782	-6.22554
4.685277	1.00E-06	1.373596	0.99638	1.31093	0.862924	1.069021	0.94835	-1.58503
4.867131	1.00E-06	1.389351	0.99638	1.283194	0.885917	1.043735	0.970056	-1.58376
4.37177	1.00E-06	1.288328	0.99638	1.36621	0.824056	1.075354	0.942294	-1.49223
4.464308	1.00E-06	1.342811	0.99638	1.252143	0.888476	1.032225	0.976666	-1.57575
-4.75771	2.00E-06	-1.43982	0.99638	-1.02684	0.993795	-1.18843	0.833617	1.555826
4.076485	4.20E-05	1.304702	0.99638	1.15415	0.959301	1.30852	0.74662	1.514525
3.36679	0.001455	-1.43018	0.99638	-1.52833	0.851473	-1.22102	0.866953	3.319957
1.761689	0.516672	-1.19261	0.99638	-3.6018	0.697388	-1.66233	0.821111	1.217955
-4.32014	6.00E-06	-1.50569	0.99638	-1.20555	0.932537	1.685663	0.410063	3.162454
5.333768	0.000107	1.448877	0.99638	1.028196	0.995481	1.341252	0.798939	1.744894
2.706074	0.001873	1.032321	0.997224	1.218296	0.940111	1.518559	0.563142	3.679949
-4.24626	0.000132	-1.5314	0.99638	-1.10611	0.976607	-1.39778	0.71526	1.221622
3.279314	0.020031	-1.30793	0.99638	1.271112	0.957361	1.157309	0.94366	1.138468
3.204694	0.018854	-1.27825	0.99638	1.249624	0.961042	1.121089	0.957299	1.128903
2.953163	0.038226	-1.04036	0.997621	1.195237	0.972744	1.24818	0.904023	1.69126
-1.76042	0.036525	-1.20928	0.99638	-1.50109	0.747694	-1.28812	0.717218	-2.64964
1.247926	0.366268	-1.03067	0.997224	-1.28429	0.85475	-1.25669	0.688925	-5.41332
-3.37647	0.000188	-1.52078	0.99638	-1.02428	0.994681	-1.73142	0.430216	-2.16391
1.426341	0.18741	1.051846	0.99638	1.186225	0.933988	1.461633	0.518488	4.620061
4.562843	0.000636	1.867941	0.99638	1.738098	0.820747	2.036346	0.460635	2.326985
-4.04407	8.00E-06	-1.44403	0.99638	-1.33631	0.865378	-1.49616	0.514765	-1.10257
2.824206	0.005672	-1.26421	0.99638	-1.88657	0.678924	-1.63019	0.569973	1.681255
-2.19049	0.023743	-1.16251	0.99638	-1.45892	0.860461	-1.32654	0.763169	-5.01945
-2.12297	0.028251	-1.1185	0.99638	-1.49317	0.845221	-1.38032	0.715849	-5.0447
-1.66524	0.411073	-1.38694	0.99638	1.129893	0.982762	-1.99989	0.6018	-9.17025
-1.92716	0.330509	-1.45555	0.99638	1.069874	0.992489	-2.04131	0.634181	-9.86564
-2.21606	0.46934	-1.07516	0.997621	-3.86056	0.793987	1.230418	0.960608	-100.53

-2.90004	0.421467	-1.0473	0.998916	-5.18782	0.794405	1.042781	0.995401	-197.896
2.827588	0.006135	-1.20692	0.99638	-1.34524	0.917476	1.193947	0.889573	-1.27375

For Review Only

<i>G_34_adj.</i>	<i>CG_31_L</i>	<i>G_31_adj.</i>	<i>CH_34_L</i>	<i>H_34_adj.</i>	<i>CG_31vsCG_3</i>	<i>CG_31vsCG_34_</i>	<i>CH_34vsCG_34_</i>
<i>P.Val</i>	<i>ogFC</i>	<i>P.Val</i>	<i>ogFC</i>	<i>P.Val</i>	<i>4_LogFC</i>	<i>adj.P.Val</i>	<i>LogFC</i>
3.30E-05	2.036678	0.042026	-1.42376	0.858725	1.905900456	0.08499	5.526609488
2.30E-05	2.143934	0.029312	-1.44117	0.850432	1.842721979	0.105921	5.693587453
0.001041	-4.64629	0.0028	-1.67186	0.858788	-3.815007062	0.012611	-10.60233186
0.397839	5.837398	4.40E-05	1.29647	0.912182	-1.514506913	0.374482	2.972936617
0.008518	2.696928	0.005096	1.564435	0.799877	1.825665283	0.115025	3.147262437
0.012428	2.565639	0.004729	1.543999	0.794366	1.678145053	0.155272	2.78854752
0.005929	2.724438	0.00299	1.674108	0.757248	1.729087854	0.132448	2.813912491
0.007867	2.650158	0.005655	1.553939	0.802571	1.843462523	0.106832	3.143923161
0.004698	2.699207	0.003771	1.540763	0.799877	1.802857912	0.109156	3.158360927
0.039575	-34.1294	0.002534	-3.13085	0.860803	-3.247108433	0.390448	-35.39680196
0.043412	-35.071	0.002402	-3.19247	0.85916	-3.177973001	0.401538	-34.91178368
0.063034	-32.0646	0.003281	-3.03233	0.866265	-2.925487631	0.450016	-30.93481766
0.064375	-32.6715	0.003037	-3.19612	0.859417	-2.802084972	0.470012	-28.64355677
0.049309	-32.1964	0.003253	-2.79716	0.877739	-3.222152979	0.401014	-37.08822292
0.000441	-1.57224	0.168393	1.073527	0.980029	-2.572032869	0.005075	-4.34119811
0.000356	-1.71552	0.084782	1.081795	0.975923	-2.206012084	0.015478	-4.094005113
0.911027	4.889824	0.434166	3.639403	0.905428	-2.809332629	0.724092	-2.090933026
0.962778	4.682558	0.428186	3.495631	0.905139	-1.618600697	0.85531	-1.208320494
0.977795	4.575662	0.439462	3.546084	0.905139	-2.017207624	0.797993	-1.563312028
0.990188	4.164272	0.41768	3.330673	0.899704	-1.59786558	0.843799	-1.278006545
0.067484	4.387533	1.40E-05	1.097729	0.968537	1.615650779	0.148333	6.457627197
0.054308	4.440464	2.30E-05	1.056702	0.986806	1.759764217	0.098489	7.394865253
0.017245	2.73974	7.40E-05	-1.07525	0.968584	1.315195445	0.315665	3.874428567
8.00E-04	4.04966	5.50E-05	1.122496	0.960892	1.604638137	0.180963	5.789099057
0.001136	-2.04016	0.022949	1.065261	0.982669	-2.02100869	0.033905	-4.392255531
0.00379	-1.91306	0.033678	1.269472	0.897046	-1.677468052	0.118264	-4.073858624
0.862289	4.134264	0.03489	2.610558	0.786553	1.024635645	0.98289	1.622685331
0.009898	-2.30624	0.001997	-1.05531	0.982594	1.316365115	0.383353	-1.660146296
0.019238	-2.54871	0.002621	-1.10611	0.965281	1.338423482	0.43201	-1.721593759
0.013303	-2.38352	0.002272	-1.01264	0.998132	1.325289084	0.399713	-1.776048249
0.001775	5.382833	2.00E-06	-1.10544	0.964511	1.537379932	0.191353	9.148033081
0.0039	-3.54606	0.00581	-1.16855	0.964212	-2.300244488	0.090173	-6.980264128
0.002113	-3.64662	0.003248	-1.3261	0.91415	-2.366173232	0.063624	-6.506711442
0.087768	2.379628	0.221397	2.203685	0.827387	1.603434542	0.587426	1.731453455
2.10E-05	2.64438	0.000545	1.041121	0.98986	2.524688755	0.00149	6.412544532
0.002092	-2.53311	0.383058	3.579505	0.794055	7.67157438	0.048086	-1.181931284
0.002121	-2.50704	0.386947	3.515276	0.796101	7.59394027	0.048235	-1.160523424
0.002275	-2.41302	0.387847	3.224208	0.802068	7.07873454	0.047004	-1.099075654
0.003407	-2.3167	0.411033	3.161814	0.806207	6.302831841	0.061989	-1.162171888
0.002248	-2.47819	0.388421	3.43823	0.79868	7.392026501	0.049116	-1.152672238
0.000153	2.463847	0.000225	-1.02072	0.994784	1.943292645	0.006951	4.887161441
0.000243	2.435543	0.000392	-1.16938	0.91415	1.874665247	0.013539	5.339190396
0.000868	5.388177	1.50E-05	1.200691	0.935711	1.733579757	0.146552	7.779549839

0.004754	-3.61329	0.010437	-1.64397	0.860437	-3.728153441	0.012965	-8.19414707
0.003327	10.85165	2.80E-05	-1.0681	0.991257	2.218139843	0.159776	25.70976538
0.002842	13.7913	1.60E-05	-1.05722	0.994073	2.290479977	0.165188	33.39606633
0.036709	2.862491	0.01414	-1.17448	0.959794	-2.314823302	0.066716	1.452347539
0.016262	-1.55013	0.444845	-1.14571	0.974956	-1.899859908	0.275469	-2.570480239
0.131224	-4.46318	0.001751	1.01752	0.998132	-1.427158246	0.550884	-6.481260441
0.053754	-4.31132	0.000836	1.066716	0.98986	-1.495607889	0.433036	-6.878226909
0.032477	-4.93165	0.000365	-1.09021	0.982669	-1.552847144	0.387379	-7.024394723
0.031691	-4.77253	0.000487	-1.10459	0.979261	-1.628772913	0.330983	-7.037322433
0.05942	-4.92634	0.000524	-1.12945	0.973153	-1.482985757	0.468123	-6.468362844
0.000139	-2.90759	0.004133	-1.29681	0.90573	-3.186423517	0.003239	-7.144334892
0.011309	4.582658	6.10E-05	-1.23568	0.925567	1.467923641	0.349294	8.312398181
0.010053	4.937772	2.70E-05	-1.00028	0.999932	1.482711455	0.324024	7.323305401
0.01596	4.208089	6.70E-05	-1.19698	0.934626	1.453732805	0.335367	7.3224279
0.028372	3.855765	8.80E-05	-1.20283	0.931553	1.384265906	0.393797	6.420005765
0.011602	4.623977	3.90E-05	-1.06174	0.986348	1.482109497	0.317684	7.276391144
0.647599	3.250409	0.000376	-1.26822	0.901546	1.373992648	0.401672	5.663902577
0.452357	2.714523	0.001495	-1.19076	0.931768	1.506550981	0.238802	4.869697406
0.037722	4.9533	7.00E-06	1.164337	0.941394	1.171420968	0.709337	4.983437957
0.015945	1.991523	0.363232	1.297981	0.959776	-6.657308238	0.009902	-4.338921378
0.132771	12.93856	0.000661	-1.42412	0.943655	1.996519318	0.431399	36.78806552
0.131167	11.84269	0.000775	-1.47624	0.93333	2.006667041	0.415254	35.08189916
0.000623	1.651839	0.23318	1.076134	0.986184	1.538760378	0.359139	2.361959175
1.70E-05	5.991848	6.00E-06	1.034195	0.994551	2.425917551	0.013816	14.05511785
0.259096	1.686543	0.474635	2.702926	0.762766	1.085411161	0.938234	-1.476530283
0.95236	4.845284	1.80E-05	-1.09576	0.972812	-1.156199943	0.755403	4.59199911
0	1.130457	0.647262	1.02326	0.994086	5.587679907	0	6.173048039
0	1.174413	0.540184	1.036465	0.98929	7.175274481	0	8.130261391
0	1.233477	0.406706	1.008852	0.998132	6.627672544	0	8.103352452
0	1.141518	0.6025	1.015487	0.996023	6.085140558	0	6.840362283
0	1.084764	0.727802	-1.00228	0.999709	4.343723792	0	4.722671627
0.888539	5.274182	0.413314	3.120747	0.920973	-3.123151239	0.69523	-1.847976239
0.109308	1.569722	0.550581	2.321325	0.799877	-1.053306993	0.962278	-1.557643832
0	1.477499	0.1533	1.427944	0.788959	4.07613714	1.00E-05	4.21759332
1.00E-06	1.479097	0.150374	1.474841	0.781396	3.960683975	1.20E-05	3.97211462
0.977803	6.565927	0.370076	3.240406	0.922761	-2.887409267	0.683877	-1.424989516
0.003062	4.977417	8.60E-05	-1.41015	0.871831	-3.2550147	0.00358	2.15633233
0.265221	-3.18321	0.003831	-1.07402	0.986184	1.93423603	0.126992	-1.532302619
0.183055	-2.81869	0.008171	1.014229	0.998251	1.883807828	0.138325	-1.517561939
3.70E-05	-1.75444	0.021234	-1.10385	0.9573	-2.170276263	0.002907	-3.44938833
7.10E-05	-1.62397	0.391041	-1.2623	0.947636	-7.015166591	0.000533	-9.025156345
0	2.058811	0.001134	1.158022	0.909151	2.453591495	0.000201	4.36216135
0.001663	10.97505	1.50E-05	1.095763	0.985974	2.487162016	0.084094	24.9111615
0.280116	8.33247	0.046466	3.607422	0.819076	1.758499723	0.697769	4.061805482
0.001321	-4.39973	0.004582	-1.42247	0.909151	-3.980885661	0.01182	-12.31298801
0	-1.03902	0.899197	-1.12378	0.936575	-4.490566712	0	-4.151858462
0	-1.02989	0.920438	-1.18942	0.892901	-4.34180537	0	-3.759466702

0	-1.05785	0.869376	-1.18551	0.912031	-5.617334761	0	-5.01243027
0	-1.06202	0.865367	-1.17182	0.929368	-5.384651469	1.00E-06	-4.880109155
0	-1.0742	0.825599	-1.17686	0.914998	-5.029858202	1.00E-06	-4.591117273
0	-1.56377	0.060799	-1.03677	0.98986	-3.396021713	1.40E-05	-5.122221029
0	-1.78057	0.05941	-1.07762	0.977757	-4.003959643	6.40E-05	-6.615804036
2.00E-06	2.239148	0.00046	-1.11129	0.944295	2.360802094	0.000417	5.874510027
0.302628	2.551133	0.086797	-3.79441	0.588188	-2.183776847	0.19322	4.432705906
0.303634	2.919319	0.053914	-3.48367	0.628413	-2.276739003	0.178636	4.466891365
0.321259	2.748501	0.069081	-3.65846	0.6032	-2.257249344	0.18251	4.454664375
0.283143	2.635737	0.082313	-3.59071	0.616762	-2.222957678	0.192402	4.257468174
0.280008	2.74339	0.068541	-3.69618	0.6032	-2.297068662	0.170256	4.414346419
0.282393	3.109735	0.0225	-3.10817	0.626033	-2.602179872	0.072017	3.71441594
0.250562	3.314551	0.019155	-2.94252	0.663561	-2.701652091	0.069071	3.610059702
0.854614	-2.88888	0.501129	1.47309	0.975126	1.095332754	0.968707	-3.885194802
0.1642	2.690827	0.000852	-1.07498	0.976769	1.063955104	0.889516	3.077591439
0.173389	3.657064	0.000194	-2.62011	0.397424	1.019014483	0.97284	9.76409014
0.17067	3.79504	0.00013	-2.38575	0.517072	-1.022115436	0.968213	8.858124887
0.156812	3.337238	0.000482	-2.7519	0.381555	1.066097608	0.901815	9.790755941
0.170459	3.47484	0.000228	-2.59386	0.381555	1.004241342	0.993871	9.051462567
0.146321	3.578278	0.000307	-2.68425	0.397424	1.065339217	0.904366	10.23258093
0.105397	4.359096	3.80E-05	1.151576	0.952233	1.149129479	0.764929	4.349833447
6.00E-06	-2.03799	0.001115	-1.32089	0.795111	-1.976608517	0.002738	-3.049693581
0.06383	1.894094	0.19243	1.828337	0.799877	-1.169970084	0.821861	-1.129352813
0	1.742616	0.000687	1.128274	0.89889	2.164384815	2.80E-05	3.342885488
0	1.855105	0.000642	1.285688	0.786553	2.188854837	8.20E-05	3.158275461
0.566001	-5.28244	4.80E-05	-1.1412	0.962975	-1.563571344	0.302359	-7.237528739
0	1.570915	0.035878	1.031062	0.990124	4.067409401	1.00E-06	6.197058957
0	1.816201	0.016887	1.03152	0.991498	4.409086933	2.00E-06	7.763093028
0	1.746832	0.024708	1.048392	0.985266	4.898898698	1.00E-06	8.162554928
1.30E-05	-2.80492	0.000706	-1.35206	0.857336	-2.875684301	0.000943	-5.965773516
1.00E-05	-2.63957	0.001069	-1.40289	0.827319	-2.793194197	0.001024	-5.255477341
0.26676	4.343145	2.10E-05	-1.02824	0.994784	1.119050461	0.804663	4.997431963
0.271255	3.209344	2.90E-05	-1.13931	0.937646	1.122070314	0.746797	4.102775778
0.039244	4.336436	4.00E-06	1.092556	0.965281	1.092677485	0.822988	4.336919662
0.159356	9.412623	0.009917	2.360679	0.86088	1.725907823	0.634373	6.881630276
0.279563	1.540956	0.595422	2.073995	0.850432	1.586557711	0.611911	1.178795408
0.002247	-3.04077	1.90E-05	-1.07283	0.970032	-1.413194497	0.178416	-4.005472212
0	2.776322	1.10E-05	1.184045	0.890406	2.139632508	0.000624	5.016963179
4.00E-06	-1.52589	0.082356	-1.04353	0.986348	-2.541563922	0.000436	-3.716365935
4.10E-05	-1.80025	0.087255	-1.04896	0.990124	-3.207779104	0.001589	-5.505273925
0.03539	3.291244	0.000255	-1.17058	0.938819	1.02643175	0.959982	3.954486783
0.019538	3.412292	0.000188	-1.08433	0.975371	1.054769585	0.913323	3.902700224
6.00E-06	-3.61713	0.17686	-2.90356	0.827387	-56.33206763	0.000102	-70.17612025
0.003444	4.175271	5.30E-05	1.036918	0.993166	1.421720987	0.356446	5.724722935
0.00301	4.080864	5.10E-05	1.063531	0.984378	1.373358026	0.405062	5.269700329
0.003888	4.210345	1.00E-04	-1.01732	0.998057	1.483334053	0.324992	6.353497424
0.003914	4.347188	7.00E-05	-1.02911	0.994784	1.465172436	0.338708	6.554816973

0.002836	4.270699	5.40E-05	1.091836	0.974703	1.465845228	0.318792	5.733630517
0.002908	2.841882	0.002862	1.127665	0.963363	1.683541169	0.173328	4.242772724
6.60E-05	2.542162	0.001005	1.286538	0.869043	2.083557078	0.011955	4.117048687
0.417462	6.642762	6.00E-06	-1.28467	0.906425	-1.756119444	0.152803	4.859424311
0.295584	6.955882	4.00E-06	-1.39091	0.868281	-1.813145361	0.127444	5.336039258
0.350767	6.770586	5.00E-06	-1.4151	0.865333	-1.756225279	0.155636	5.455483922
0.354238	6.365393	4.00E-06	-1.36656	0.869033	-1.683607991	0.167624	5.16671264
0.324166	6.785911	4.00E-06	-1.31808	0.897046	-1.734913312	0.157246	5.155533956
1.00E-06	-1.2408	0.342014	1.065279	0.970032	-2.745295159	3.20E-05	-3.628734697
3.00E-06	-1.22175	0.410975	1.07262	0.966908	-2.705355461	7.40E-05	-3.545285909
1.00E-06	-1.19248	0.454234	1.073242	0.965252	-2.629624154	5.90E-05	-3.365436717
3.00E-06	1.022114	0.965418	1.258224	0.91415	5.127535148	5.50E-05	4.165335745
5.00E-06	-2.59206	0.004575	1.08531	0.977792	3.805209737	0.000298	1.352633135
0.000798	3.050767	0.000129	-1.16341	0.932776	1.924389572	0.023465	6.830215214
0.843018	1.579045	0.502886	1.651149	0.888873	-1.69687285	0.473605	-1.774357559
0.812901	1.45615	0.562272	1.594622	0.889526	-1.571525866	0.520198	-1.720969519
0.842512	1.435155	0.561479	1.629195	0.871306	-1.500630328	0.553898	-1.703523367
0.86449	1.514543	0.503985	1.61887	0.877582	-1.548137851	0.524753	-1.654779872
0.843093	1.53932	0.53317	1.581574	0.899456	-1.694752812	0.478223	-1.741273419
0.835591	11.98804	0.484568	11.19351	0.85777	-3.331850795	0.821391	-3.111026221
0.002785	6.267381	1.30E-05	1.188341	0.945725	1.549323806	0.308018	8.171227111
0.00419	5.807934	1.50E-05	1.095622	0.976321	1.557463546	0.285316	8.256175632
0.002522	6.205874	1.30E-05	1.175818	0.950961	1.541825267	0.311471	8.137633321
0.002365	6.148593	1.10E-05	1.190878	0.943919	1.556303219	0.28723	8.035313407
0.002333	6.235838	1.30E-05	1.281617	0.911444	1.593743481	0.272805	7.754519944
0.110512	-3.26965	3.90E-05	1.356409	0.827387	1.850414417	0.026814	-2.396750096
0.054883	1.606872	0.298128	1.663483	0.821017	-1.203732542	0.758205	-1.246140791
0.081486	1.746289	0.259208	1.781534	0.806902	-1.176518149	0.812858	-1.20026347
0.06767	1.712748	0.287854	1.727856	0.827387	-1.216685218	0.772663	-1.227417573
0.212561	1.586921	0.535419	2.506569	0.786553	1.04616074	0.966928	-1.509822006
6.70E-05	-1.78589	0.07422	-1.38901	0.85777	-3.808186988	0.000195	-4.896305505
0.001039	5.977533	1.50E-05	-1.08281	0.981048	2.240619889	0.037818	14.50242479
0.932799	3.646174	0.187163	2.637097	0.855795	-1.050124465	0.97584	1.316650313
0.945161	3.510823	0.208258	2.607786	0.85916	-1.019943443	0.990222	1.319960539
0.955773	3.687368	0.403994	3.078726	0.894688	-1.551717065	0.835023	-1.295588806
2.30E-05	-1.81475	0.133872	1.015958	0.998132	4.544783519	0.000395	2.465021039
1.80E-05	1.575076	0.076754	1.058763	0.980029	3.086955257	9.10E-05	4.592330089
6.90E-05	1.634855	0.060346	1.133048	0.943919	2.799039353	0.000337	4.03868589
3.40E-05	1.591545	0.059067	1.137208	0.935777	2.708511338	0.000247	3.7906146
3.50E-05	1.552886	0.078453	1.078674	0.969014	2.919065816	0.000121	4.202358045
2.30E-05	1.582596	0.072284	1.108563	0.95692	3.015221747	0.00011	4.304561879
0.000128	-2.41049	0.001257	-1.19105	0.912315	-1.683367468	0.067219	-3.406853127
0.398072	1.138004	0.870073	-2.98649	0.72298	1.045979257	0.964284	3.554902645
0.632033	-1.10683	0.867663	-4.61324	0.338475	1.017474941	0.982222	4.240821342
0.602675	-1.172	0.806209	-5.09509	0.338475	1.031291801	0.971091	4.483397537
0.061379	3.115082	0.000327	1.726988	0.72298	1.220176815	0.614557	2.2009137
0.752945	6.363526	0.472619	5.114734	0.905139	-4.61712027	0.718138	-3.711046496

0.199867	-2.92304	2.10E-05	1.010761	0.998057	-1.071368226	0.838311	-3.165353898
0.06234	-3.38279	7.00E-06	-1.17881	0.906425	-1.08986857	0.8037	-3.12755047
0.092078	-3.03727	1.20E-05	-1.00889	0.998132	-1.073245132	0.831404	-3.230997248
0.119894	-3.09678	7.00E-06	-1.11204	0.943331	-1.062141778	0.854164	-2.957826621
2.00E-06	-1.9176	0.003113	-1.12613	0.933339	-2.050154138	0.002087	-3.49106079
5.00E-06	-1.00445	0.992076	1.070439	0.980029	-4.103857357	5.80E-05	-4.412495071
0.013515	-1.00354	0.994189	1.376094	0.865333	1.070102582	0.896445	-1.290493067
0	1.183749	0.503608	1.14769	0.920973	-3.852008581	2.00E-06	-3.7346688
0	1.233969	0.421593	1.20843	0.893228	-4.0429537	2.00E-06	-3.959278357
0.001079	-2.33804	0.000386	1.275441	0.849467	1.959514091	0.00574	-1.521822393
0.161369	-14.2159	3.00E-06	-1.0178	0.998132	1.355442866	0.62474	-10.30458778
0.001943	-4.06087	0.068571	2.061892	0.867154	4.054211857	0.022957	-2.065277858
0.038539	-3.22209	0.095627	2.022169	0.85777	5.400059069	0.020928	-1.206581037
1.60E-05	-3.27974	0.000362	-1.04062	0.991498	-2.33208453	0.012009	-7.35005196
0.004618	-3.58641	0.003892	-1.18222	0.959742	-2.180167766	0.099931	-6.613814643
0.003454	-3.47819	0.002837	-1.21455	0.945139	-2.025107303	0.114859	-5.799438474
0.11731	4.755733	0.000103	-1.38391	0.880418	1.306029553	0.580082	8.595671421
0.115784	5.049573	9.60E-05	-1.33658	0.901484	1.250112603	0.668804	8.437193918
0.113949	4.676502	8.90E-05	-1.38088	0.877425	1.268027519	0.621147	8.188525604
0.096591	5.03449	7.50E-05	-1.32075	0.902662	1.270787112	0.631493	8.449830275
0.120053	4.973507	0.000115	-1.2851	0.915524	1.280052207	0.630721	8.181422102
0.808634	7.627594	0.000826	1.043569	0.995876	-1.605221073	0.522082	4.553355879
0.789722	7.391206	0.00114	-1.05133	0.994799	-1.594261741	0.538153	4.874085516
0.785242	7.577024	0.000921	1.024773	0.998132	-1.663317459	0.488595	4.445246864
0.750162	7.470512	0.001135	-1.03665	0.996942	-1.652990712	0.502357	4.685018999
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0.015364	-3.35446	0.000987	-1.05171	0.990445	-1.701658968	0.17949	-5.427490903
0.606222	4.230423	0.009876	-1.34373	0.935711	1.369336858	0.677852	7.784048318
1.00E-06	2.308554	8.10E-05	1.121599	0.929858	1.980774167	0.001298	4.076966809
0.067432	2.394086	0.124823	-1.04772	0.994784	1.15023763	0.868344	2.885169461
0.004775	-3.04966	0.000139	-1.02208	0.995618	-1.374546701	0.318994	-4.101356612
0.004552	-3.06257	0.00022	-1.01865	0.996324	-1.460804079	0.244054	-4.391909299
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0.819338	4.099813	0.000876	-1.07718	0.986184	-1.324168442	0.598815	3.335111325
0.885976	4.399472	0.000481	1.085871	0.982669	-1.303001224	0.620957	3.109406996
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0.277753	2.383097	0.424102	2.869224	0.846883	1.285701603	0.865856	1.067867465
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0.019981	7.548148	2.00E-06	-1.19538	0.937021	1.404647805	0.409558	12.67403252
0.8757	4.247203	0.030436	2.665133	0.781396	1.025507251	0.982046	1.634266493
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6.10E-05	-2.42763	3.30E-05	-1.05719	0.971617	-1.570860074	0.027845	-3.607152127
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0.001802	3.228634	0.000187	1.233528	0.905436	1.648273189	0.121392	4.31418675
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5.00E-06	2.307497	0.000136	1.152021	0.908639	2.057707187	0.001171	4.121585556

5.00E-06	2.375821	0.000154	1.178015	0.899188	2.172783024	0.000896	4.382069696
2.00E-06	2.262261	0.000157	1.152396	0.906425	2.282719595	0.000261	4.481192773
2.00E-06	2.364095	0.000108	1.159337	0.905416	2.117521132	0.000873	4.318003153
0.001312	5.273299	0.000332	-1.39105	0.902662	2.100629157	0.123615	15.40897871
0.004356	2.936685	0.00023	1.121981	0.955347	1.590956833	0.124628	4.164187233
0.000355	-2.37232	0.001932	1.110985	0.959742	-1.654752914	0.08699	-4.361294908
0.052763	-2.72886	0.039244	-1.72039	0.839356	-1.990076487	0.204384	-3.156624191
0	-1.33377	0.131403	-1.04674	0.977792	-2.897494012	3.00E-06	-3.692024122
8.00E-06	2.392054	0.000814	-1.15857	0.929858	2.20108107	0.003399	6.099982801
3.60E-05	2.10883	0.001133	-1.15843	0.912031	1.9607067	0.004635	4.789865268
0.844302	11.1996	0.119094	11.19665	0.746029	-1.454410906	0.868944	-1.454028162
0.012662	2.038892	0.070906	1.143033	0.964044	1.168365401	0.783249	2.084079517
0.029984	1.719459	0.094037	1.103722	0.968413	1.070860545	0.889651	1.668265806
0.019364	2.023079	0.072372	1.157153	0.959785	1.106617178	0.863932	1.934725853
0.037086	1.755176	0.054072	1.125771	0.956875	1.010885292	0.98235	1.576059729
0.022657	1.615579	0.11117	1.082913	0.973901	1.215388049	0.612907	1.813215753
0.018038	-4.30173	3.70E-05	1.23487	0.913121	-1.606302178	0.184985	-8.532802304
0.02108	-4.83186	4.60E-05	1.164061	0.952663	-1.601800367	0.239433	-9.009444125
0.021821	-4.54184	7.00E-05	1.217364	0.932464	-1.613222726	0.227851	-8.919628881
0.435188	-4.91074	8.00E-06	1.332678	0.868044	1.581165685	0.184849	-4.138993318
0.293088	-3.74211	4.00E-06	1.213988	0.893228	1.528792468	0.103758	-2.971550079
8.30E-05	3.486206	2.70E-05	-1.12193	0.952663	2.508372994	0.001462	9.810954129
0.005779	5.987359	5.20E-05	-1.58356	0.833683	2.145103467	0.079786	20.33844698
0.000341	2.935447	0.000128	1.081997	0.970339	1.834786857	0.029537	4.977758707
0.000517	3.060438	0.000152	1.189254	0.920528	1.901846875	0.028898	4.894229574
6.50E-05	3.810724	4.60E-05	1.362652	0.856098	2.40998323	0.005919	6.739637696
0.000111	3.734041	5.80E-05	1.279001	0.892901	2.306403307	0.008893	6.733538887
0.000103	3.866383	7.50E-05	1.265152	0.902662	2.521077061	0.00596	7.704571429
0.00012	3.637097	8.90E-05	1.230866	0.909151	2.438549436	0.006154	7.205689399
5.10E-05	4.064989	4.50E-05	1.383714	0.854976	2.58241128	0.00463	7.586449816
0.003934	2.8216	3.80E-05	1.202538	0.893228	1.505773798	0.099124	3.533103176
0.234449	4.829076	1.00E-06	-1.18762	0.909026	1.028644433	0.945859	5.899381168
0.225551	5.098588	1.00E-06	-1.17691	0.91415	1.054675612	0.891124	6.328674619
0.450756	4.930936	1.00E-06	-1.11904	0.948972	1.024696167	0.953241	5.654173291
0.411449	3.726681	1.00E-06	-1.11501	0.938819	1.070411193	0.830381	4.447884475
0.001266	6.11951	2.00E-05	-1.02482	0.996324	1.729383747	0.196923	10.84564819
0.00098	7.045807	2.00E-05	-1.12403	0.971906	1.823289138	0.187401	14.43984951
0	1.054214	0.813428	1.150541	0.893228	3.356498157	0	3.075483414
0.001057	1.624073	0.091931	2.468254	0.340594	1.925572009	0.028846	1.266996783
0.000336	-1.62225	0.112597	1.205311	0.919889	-1.950619507	0.034693	-3.814078646
0.000737	-1.82813	0.079856	1.108723	0.970032	-2.008135297	0.054266	-4.070268307
0	1.445163	0.313588	-1.16734	0.947292	-10.30072683	0	-6.105948569
0.003506	1.952476	0.195145	-3.45482	0.571993	-5.810034859	0.001023	1.161000862
0.002414	1.896867	0.207496	-3.59841	0.522805	-5.851188981	0.000809	1.166551502
0.002114	1.77188	0.260915	-3.69999	0.492229	-5.694787503	0.000823	1.151216953
0.003085	1.920687	0.199348	-3.62769	0.518902	-5.852258958	0.000837	1.190592902
0.003153	1.963513	0.186872	-3.72798	0.510672	-6.021755087	0.000776	1.215580747

0.002244	-3.32186	1.00E-06	-1.00031	0.99992	1.026128922	0.930747	-3.236267771
0.027189	-4.26916	1.10E-05	1.178685	0.931895	-1.070676909	0.878839	-5.38764422
0.03056	-4.45905	1.40E-05	1.239343	0.90573	-1.054718896	0.911738	-5.828685089
0	-2.17852	0.021224	-1.24709	0.91296	-5.489870927	2.00E-05	-9.590168781
1.00E-06	-1.91219	0.038813	-1.18044	0.935692	-4.904546888	1.80E-05	-7.944856437
0.881394	3.964602	0.000195	-1.03297	0.994784	1.047619797	0.934781	4.290344297
0.00213	2.319412	0.001497	-1.20808	0.902783	1.848493923	0.025071	5.179560854
0.00203	3.881583	0.00013	-1.08106	0.978424	2.164302405	0.028174	9.081884648
0.003216	3.321932	0.00016	-1.14503	0.948074	2.127264424	0.017213	8.091520427
0.152589	-3.70789	1.40E-05	1.353583	0.833683	1.673363515	0.071863	-2.999312787
0.222285	-3.7743	1.60E-05	1.35158	0.843672	1.687932985	0.075174	-3.022196981
0.000714	5.511835	9.00E-06	-1.04295	0.99143	2.022567366	0.048235	11.62683571
0.001397	1.485315	0.426776	1.410971	0.897829	2.522588439	0.052035	2.655502332
0.001644	1.489738	0.401061	1.513114	0.865333	2.437461191	0.051699	2.399804627
0.001364	1.497654	0.341312	1.484409	0.858982	2.067741747	0.083084	2.086191259
0.00436	1.351727	0.534496	1.333755	0.909151	2.222624089	0.078532	2.252573678
0.001559	1.42951	0.489289	1.442016	0.89342	2.694220002	0.041027	2.670853688
0.068624	-1.79306	0.434934	1.715914	0.893228	3.984249394	0.053055	1.294963057
0.079475	-1.86368	0.384902	1.792786	0.872774	3.982904697	0.045911	1.192062901
0.103863	4.276297	0.006793	-2.13277	0.786553	1.573101977	0.494611	14.34723682
0.106769	4.479711	0.006034	-2.01564	0.798696	1.577488362	0.499842	14.24391314
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1.00E-06	1.609573	0.147153	-1.56079	0.786553	-4.890881943	2.20E-05	-1.946844802
2.00E-06	1.644552	0.143125	-1.45465	0.83346	-4.663048707	5.00E-05	-1.949229541
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1.60E-05	2.378138	0.003595	-1.474	0.794055	2.252242462	0.009262	7.894976292
0.85227	2.323159	0.57063	2.30787	0.901249	-1.530078282	0.860806	-1.520008649
8.00E-06	-1.78617	0.003833	-1.06607	0.965998	-2.082666707	0.000705	-3.489464495
0.253266	4.98238	2.00E-06	1.044054	0.98986	-1.063181928	0.889181	4.488553668
0.03564	2.110017	0.069765	1.364761	0.89889	1.229201862	0.714924	1.900433926
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0.048227	2.367804	0.023291	1.449984	0.862463	1.369174843	0.506453	2.235842648
0.044186	2.467395	0.023471	1.487889	0.859417	1.402413649	0.493391	2.325650272
0.022147	-4.42385	0	1.32033	0.786553	2.042469181	0.00095	-2.859748707
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0.012507	-4.15112	0	1.289461	0.786553	2.01202501	0.000518	-2.660356068
0.001274	2.232433	0.035555	1.147009	0.961431	2.65066765	0.015604	5.159016353
0.00081	2.266275	0.031328	1.140052	0.963568	2.634652958	0.015744	5.237346058
0.001777	2.173205	0.041786	1.185668	0.948972	2.7045739	0.013306	4.957201012
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0.001134	2.328708	0.027395	1.239989	0.932298	2.581557251	0.019094	4.848181416
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0.006602	10.23629	0.000495	-1.22604	0.96693	2.549963825	0.189736	32.00239866
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0.003912	3.685772	1.10E-05	1.023863	0.994784	1.288183434	0.419071	4.637292556
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1.00E-06	-1.3353	0.434937	-1.43306	0.846371	-3.826744215	0.000277	-3.565693968
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1.00E-06	-1.07327	0.815671	-1.48669	0.741217	2.414309858	0.000641	3.344277006
4.00E-06	-2.3978	0.000843	-1.44302	0.786553	-2.364036865	0.001641	-3.928206368
6.00E-06	-2.60111	0.000885	-1.49122	0.786553	-2.491149729	0.002264	-4.34525414
7.00E-05	1.660063	0.030861	1.17835	0.906194	1.738953917	0.025576	2.449842557
0.000186	1.483031	0.063999	1.045041	0.981891	1.619253946	0.0309	2.297903185
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1.00E-06	1.087887	0.682903	1.190966	0.857336	2.311229243	2.60E-05	2.111189147
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1.00E-06	-2.0942	0.003381	-1.12585	0.944295	-2.4604441	0.000887	-4.576687917
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0.084974	-5.46182	9.00E-06	1.494676	0.819163	2.196130284	0.025631	-3.717289176
0.000235	3.453481	1.90E-05	-1.03633	0.990669	1.878561342	0.021375	6.72329117
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9.70E-05	1.005431	0.992385	-1.28963	0.914559	-4.997811481	0.000232	-3.854438602
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0.003848	9.959705	1.80E-05	1.103807	0.981891	1.943165893	0.215881	17.53328703
0.004231	10.13558	2.10E-05	1.12158	0.978275	1.971656358	0.214108	17.81761609
0.003953	10.20721	1.80E-05	1.13682	0.974956	1.95677971	0.216914	17.56942242
0.004057	11.23071	1.20E-05	1.293459	0.935777	1.915844474	0.237697	16.63468771
0.0054	9.780269	1.50E-05	1.118177	0.978272	2.001882989	0.180296	17.50970661
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0.026755	2.085192	0.342625	1.222387	0.972648	-6.140239602	0.016139	-3.599546042
3.00E-06	1.277046	0.675913	1.016225	0.998482	-12.48536533	1.30E-05	-9.9353786
0.110532	6.955013	5.50E-05	1.618695	0.845397	1.357891479	0.592217	5.834423828
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0.079298	1.819421	0.080155	1.092714	0.975126	1.032481739	0.954447	1.719130615
0.002987	1.686804	0.13828	1.091431	0.975923	2.782016429	0.005071	4.299599737
0.001655	1.682104	0.1041	1.093113	0.972569	2.595300101	0.004366	3.993698866
0.001555	1.684048	0.130159	1.016251	0.998057	2.840942902	0.003542	4.707777152
0.001188	1.648353	0.135493	-1.0291	0.994784	2.828199245	0.002836	4.797538729
0.001956	1.626916	0.159935	1.087484	0.976769	2.82543381	0.00363	4.226950754
2.00E-06	-1.44333	0.099101	-1.18559	0.897046	-2.500203784	0.000179	-3.043727351
1.00E-06	-1.68474	0.010618	-1.08065	0.959742	-2.696804006	2.90E-05	-4.204326149
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0.001004	-2.26154	0.000573	1.103192	0.952663	-1.994661927	0.004519	-4.976513103
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0	-1.05739	0.882029	-1.39193	0.827387	-5.534107294	2.00E-06	-4.20401643
0	-1.11885	0.754695	-1.53429	0.778608	-5.434894749	2.00E-06	-3.96328621
0	-1.066	0.865189	-1.53742	0.771458	-5.723159091	1.00E-06	-3.968283262
0	-1.05537	0.887634	-1.42307	0.80749	-5.641083184	2.00E-06	-4.183521316
0	-1.06804	0.863074	-1.56668	0.756265	-5.704560969	2.00E-06	-3.888943882
0.000289	-1.7	0.32045	-1.05563	0.99328	-9.117061645	8.30E-05	-14.68222761
0.147248	-3.93389	5.20E-05	1.438283	0.827387	1.84061772	0.066554	-3.073995004
0.132157	-4.02276	2.90E-05	1.435947	0.821017	1.880039293	0.048916	-3.072527279
0.502474	-8.49766	1.60E-05	1.038598	0.994784	-1.154874738	0.825585	-10.19252267
1.80E-05	1.249172	0.819877	-5.24373	0.648857	-17.3880686	0.000588	-2.654539224
1.90E-05	1.300471	0.781036	-5.18977	0.648857	-17.63772124	0.000489	-2.613328932
1.70E-05	1.263507	0.807287	-5.32659	0.632432	-17.48293813	0.000509	-2.597688496
1.80E-05	1.308707	0.774614	-5.25361	0.637185	-17.84568095	0.000465	-2.595569284
1.90E-05	1.306987	0.77614	-5.00918	0.65317	-17.64146881	0.000489	-2.694616348
0.935938	6.934928	0.016956	1.157626	0.986184	-1.077002272	0.956102	5.562331415
9.20E-05	-7.145	3.50E-05	1.178195	0.959742	7.782966005	4.10E-05	-1.081619188
0.730763	-6.96977	7.10E-05	1.649821	0.841945	1.585138884	0.392655	-7.254173556
0.741746	-6.83601	7.30E-05	1.739554	0.810863	1.6364233	0.349456	-7.266824987
0.684416	-6.36453	6.00E-05	1.718254	0.799877	1.585382715	0.356438	-6.897938444
0.726889	-6.9527	7.60E-05	1.642056	0.845397	1.595674943	0.386737	-7.154790217
0.743908	-6.9873	5.10E-05	1.719559	0.811448	1.621909506	0.349294	-7.407981346
0.000106	2.432316	0.000781	1.119829	0.95042	2.059562164	0.00785	4.473457484
0.242135	-3.79912	1.00E-05	1.360936	0.827387	1.605411343	0.097547	-3.220584302

0.037158	3.14109	0.000116	-1.07503	0.975371	1.391718029	0.30266	4.699499259
0.001148	2.446649	0.001016	1.185592	0.916799	1.93542335	0.018447	3.994039514
0.001409	2.346723	0.001642	1.03605	0.991236	1.96661102	0.016028	4.454504807
0.001225	2.431072	0.001074	1.057775	0.981891	1.924720578	0.019268	4.423564094
0.000362	-1.91558	0.031343	1.099367	0.967615	-2.585411648	0.003133	-5.444683618
5.10E-05	2.011829	0.195499	1.827932	0.827387	6.659869542	0.00076	7.329878082
7.90E-05	1.859477	0.245123	1.81417	0.824984	5.973846871	0.001058	6.123036316
0.000581	6.03285	4.10E-05	1.131621	0.968537	2.587601448	0.024761	13.79491046
0	2.237553	0.000995	1.004806	0.999217	-3.544577217	9.00E-06	-1.591744734
0	2.181273	0.001415	-1.2129	0.892901	-3.802950254	5.00E-06	-1.437421753
0.013185	2.191951	0.004612	1.134003	0.947292	1.850503489	0.034599	3.576897264
0.015574	2.155139	0.005497	1.119866	0.955582	1.881769118	0.02981	3.621392475
0.00019	2.304475	0.012898	-1.43113	0.848303	1.469994396	0.322515	4.848033712
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1.60E-05	-2.55113	0.000585	-1.01508	0.997296	-2.307877195	0.002871	-5.800219767
0.003614	2.825039	3.80E-05	-1.09856	0.956566	1.578581188	0.062571	4.899098429
0.008959	2.681841	4.80E-05	-1.07272	0.967392	1.470137976	0.109532	4.229373328
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1.00E-06	-1.56948	0.150168	-1.33979	0.865333	-3.702680531	0.00013	-4.337453535
1.00E-06	-2.46116	0.003285	-1.06584	0.981891	-3.656012834	0.000141	-8.442201889
3.30E-05	-2.22003	0.037893	-1.11247	0.972832	-4.186274638	0.000619	-8.354101369
2.70E-05	-2.81464	0.002919	-1.32932	0.894301	-2.346473955	0.012586	-4.968331406
0.00039	2.754297	1.30E-05	1.100656	0.945654	1.639691461	0.022451	4.103188233
0.615225	-11.9195	4.20E-05	1.378905	0.929858	1.749007038	0.396728	-9.397256696
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6.00E-06	1.532515	0.039182	1.196545	0.879202	1.9076956	0.003337	2.443343694
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1.40E-05	3.122176	0.000752	-1.10873	0.967392	3.050299294	0.00153	10.55903446
1.00E-06	2.454268	0.003978	-1.02963	0.994784	4.675360198	2.10E-05	11.81460308
2.00E-06	2.401956	0.004906	-1.08037	0.976925	4.168287318	5.70E-05	10.81667499
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8.60E-05	4.782194	0.008736	1.419541	0.929368	3.056964001	0.080236	10.29839467
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1.50E-05	4.679288	0.001131	-1.0157	0.998473	4.351733083	0.002875	20.68268252
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3.80E-05	-4.64454	6.00E-05	-1.35443	0.882459	-2.421701692	0.017726	-8.304401307
2.30E-05	-4.0164	9.70E-05	-1.26783	0.905139	-2.403788148	0.012644	-7.615070967
2.70E-05	-4.17156	0.00011	-1.26543	0.909151	-2.410824551	0.015914	-7.947448794
0.005635	2.887144	1.00E-05	-1.09089	0.955418	1.168667052	0.561696	3.680769308
5.00E-06	1.755823	0.009027	-1.09224	0.956359	2.298341015	0.000438	4.407720979
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4.00E-06	1.834898	0.008524	-1.03134	0.991016	2.441814373	0.000426	4.620914718
7.00E-06	1.792394	0.005785	-1.07036	0.965998	2.151759661	0.000805	4.128158475
0.015371	3.618124	1.20E-05	-1.33506	0.83916	1.51654554	0.140884	7.325549855
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0.703138	-4.34709	5.50E-05	1.303516	0.895349	1.486515874	0.305971	-3.811931737
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5.10E-05	-2.43166	0.005077	-1.1627	0.944063	-3.104857764	0.000918	-6.493449325
0.821857	3.6263	0.115497	2.425473	0.841945	-1.50609692	0.711791	-1.007362309
0.000342	-2.38402	0.039001	-1.31777	0.912031	-4.260764851	0.001351	-7.708286268
0.418934	5.226645	0.02556	2.50003	0.806902	1.310830255	0.815054	2.740464468
0.315161	4.338521	0.038672	2.684281	0.786553	1.505127201	0.66828	2.432691117
0.786491	-3.38705	0.008464	1.355429	0.912031	-1.075511365	0.921417	-4.937574346
0.016788	-5.85892	1.70E-05	-1.02075	0.997297	-1.59370871	0.263862	-9.147626343

0.024605	-12.0021	6.50E-05	1.012004	0.999217	-1.60446897	0.509567	-19.48820131
0.027814	-12.0985	7.00E-05	-1.02363	0.998132	-1.595486737	0.520778	-18.85730561
0.027802	-10.8633	6.00E-05	1.180914	0.969996	-1.664943905	0.443723	-21.35887205
0.039505	-10.8618	0.000107	1.182412	0.970924	-1.590814655	0.519587	-20.43098273
0.019111	-12.2239	6.10E-05	1.101043	0.987492	-1.612760145	0.504843	-21.70621607
0.920793	-5.19625	7.60E-05	1.51992	0.846038	1.417270117	0.460502	-5.572602965
0.880868	-5.07115	9.40E-05	1.587995	0.821716	1.429202041	0.448437	-5.634585829
0.867723	-5.28257	9.20E-05	1.519412	0.8501	1.429787213	0.460524	-5.613703859
0.992327	-5.43215	6.60E-05	1.394752	0.883799	1.378152156	0.511833	-5.497577514
0.892714	-5.17446	9.20E-05	1.549108	0.83916	1.409362521	0.475906	-5.687538899
0.000222	2.634785	0.014887	1.181593	0.953844	2.810192568	0.014042	6.266330334
0	1.080896	0.766666	1.314131	0.795598	2.833245055	2.20E-05	2.330395078
0.572938	5.296751	1.00E-06	1.040554	0.990124	-1.172619899	0.673556	4.340980478
0.598073	4.458283	4.00E-06	-1.11328	0.959675	-1.061015897	0.889651	4.677910156
0.054202	-4.39893	8.00E-06	1.571851	0.751898	2.041933562	0.019221	-3.386236508
0.064176	-4.43431	8.00E-06	1.501329	0.786553	1.98531848	0.025317	-3.353294866
6.00E-05	2.143062	0.006131	-1.05266	0.986026	2.148249228	0.009102	4.846248108
0.001682	3.459981	0.001514	-1.18337	0.950743	4.620607495	0.000308	18.91885928
0.030514	3.933289	0.003911	-1.05267	0.993368	4.844456846	0.001786	20.05818714
0.13746	3.3085	0.035715	1.080685	0.99087	-1.176705342	0.848922	2.60174266
0.017656	-6.52451	0.001843	-1.43768	0.922761	-1.983484195	0.317947	-9.001489672
0.018735	-5.70686	0.002116	-1.46062	0.909151	-2.042297296	0.260364	-7.979560523
0.015649	-5.61733	0.001796	-1.31505	0.939287	-2.001512743	0.261456	-8.549610798
3.60E-05	2.725361	0.000122	-1.04104	0.987616	2.561914839	0.000465	7.268705431
4.00E-05	2.961509	0.000106	-1.04147	0.989525	2.603768853	0.000771	8.030836323
0.126529	-3.5093	6.00E-06	1.202895	0.897046	1.675506371	0.041146	-2.519429856
9.60E-05	2.560815	1.40E-05	-1.19666	0.867154	1.494312717	0.048952	4.579216205
0	1.821035	0.004701	-1.23076	0.861653	-4.391146213	0	-1.959236963
0	1.999441	0.002721	-1.36088	0.787653	-5.336642947	0	-1.96128253
0.527628	-3.06069	8.40E-05	1.501818	0.760742	1.380506114	0.287912	-3.329646108
0.376625	-1.06994	0.93181	1.105986	0.986348	1.647553428	0.47826	1.39229672
0.441316	-1.0876	0.923316	-1.02352	0.998145	1.56571123	0.582781	1.473468807
0.5362	-5.65365	4.00E-06	1.230198	0.912273	1.08613774	0.863269	-6.40351644
0.000234	-3.38146	2.40E-05	-1.08923	0.965281	-1.65963918	0.068005	-5.152276463
0.012038	5.96883	0.000278	-1.15929	0.967392	1.83661195	0.253026	12.70861601
1.00E-06	-2.67138	0.004019	-1.47047	0.833094	-3.01331107	0.002337	-5.474240522
0.045158	-1.95202	0.162956	-1.59776	0.858982	-2.630476172	0.049741	-3.213703444
0.000189	3.230216	0.00488	-1.00785	0.99922	3.141904413	0.008994	10.22874756
1.00E-05	-3.34273	0.000132	-1.26406	0.895349	-1.849384431	0.051229	-4.890570713
0.674494	2.441983	0.002811	-1.50051	0.786553	1.097623658	0.87525	4.021923649
6.80E-05	2.006526	0.000768	1.107405	0.938819	1.9098815	0.00255	3.460547283
2.60E-05	2.041958	0.001473	1.103485	0.948972	2.342168164	0.000431	4.334093231
9.00E-06	2.898912	8.00E-06	1.131766	0.927381	1.643711385	0.023017	4.210211542
0.997825	14.1198	0.134552	13.63256	0.736924	-1.021191918	0.992405	1.014247304
0.648991	4.99313	0.003014	1.060227	0.99328	-1.502913951	0.547889	3.13357268
0.953404	9.132442	0.224798	8.110895	0.811988	-1.206901356	0.937078	-1.071898382
0.010091	2.919633	0.000204	1.066536	0.978275	1.456175546	0.220771	3.986266337

0.00317	3.470749	0.000183	1.032141	0.994438	1.675391518	0.132353	5.633790102
0	-2.31088	0.001444	-1.19677	0.905428	-3.90570405	1.30E-05	-7.54166873
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8.20E-05	2.956704	0.002342	-1.21033	0.933799	2.208793545	0.032896	7.904371921
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0	2.716363	1.10E-05	1.19824	0.871874	2.031444593	0.001085	4.605206049
0	2.66241	6.00E-06	1.244964	0.826493	2.045361225	0.000484	4.374092929
1.20E-05	1.34266	0.188975	-1.23438	0.862463	1.989475979	0.002785	3.297253033
4.00E-06	1.349008	0.228975	-1.29201	0.845678	2.25262648	0.001421	3.926160125
0.025842	2.685281	0.000871	-1.21506	0.909162	1.580599935	0.147335	5.157148294
0.02054	2.648522	0.001091	-1.09413	0.968422	1.659839162	0.107215	4.809918467
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0.03144	2.564001	0.001069	-1.15787	0.936503	1.551843258	0.15367	4.607073719
0.001388	1.274528	0.431232	1.085475	0.970786	2.304015299	0.004635	2.70529789
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2.20E-05	-1.82458	0.022371	-1.28485	0.865884	-2.287629032	0.003186	-3.248594257
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0.004228	-2.85187	8.00E-06	-1.01148	0.997297	-1.42992152	0.104775	-4.031670115
0	1.032279	0.917065	1.197568	0.892901	3.060547056	2.10E-05	2.638129359
0	1.048335	0.871822	1.199211	0.892312	3.060620368	1.80E-05	2.675555978
0	1.124013	0.66059	1.268358	0.848303	2.955145553	2.90E-05	2.618836253
0	1.015062	0.963091	1.163635	0.910825	3.13036279	1.80E-05	2.730678671
1.00E-06	1.078372	0.805645	1.315019	0.833094	3.199974935	3.10E-05	2.624116589
0.002406	2.459883	0.000812	-1.08392	0.968422	1.714930935	0.051731	4.572541945
0.001939	2.548435	0.00046	-1.03898	0.98986	1.663041085	0.063342	4.403335619
0.002299	2.460369	0.000543	-1.05733	0.980029	1.759759512	0.033305	4.57787127
0.66673	-4.38405	3.00E-06	1.110008	0.959431	1.372116829	0.301929	-3.546586564
0.642624	-4.29748	1.00E-06	1.141478	0.934687	1.432264737	0.188853	-3.424976019
5.70E-05	3.932392	1.80E-05	-1.02798	0.994762	2.16132494	0.010478	8.737008669
3.40E-05	3.823231	2.00E-05	-1.05367	0.986026	2.24165773	0.00699	9.030371013
5.40E-05	3.688553	2.10E-05	-1.08092	0.972631	2.077354545	0.011917	8.282451996
3.80E-05	3.980177	2.10E-05	-1.0639	0.981557	2.193144035	0.010709	9.286898154
5.00E-05	3.802513	1.20E-05	1.008195	0.998941	1.903271089	0.023393	7.178386355
1.00E-06	-3.35219	0.000811	-1.16606	0.950961	-2.947279412	0.003758	-8.472811136
0.000131	1.88039	0.009544	-1.0266	0.993495	1.964273348	0.008768	3.791859808
0.000359	1.842277	0.011569	1.034548	0.990586	1.907423453	0.011541	3.396655575
0.00026	1.861187	0.010798	1.056394	0.980029	1.92953237	0.010715	3.399507701
0.000298	1.844224	0.013271	-1.03652	0.990124	1.890341325	0.014767	3.61354139
0.000102	-2.20381	0.000824	-1.10435	0.952279	-1.570052722	0.065401	-3.133135273
0.157053	6.867983	7.60E-05	-1.13125	0.973224	1.322021355	0.641729	10.27131745
0.028093	13.87929	2.50E-05	-1.04304	0.995876	1.721135033	0.42329	24.91635346
0.029628	14.08736	2.60E-05	-1.09196	0.989539	1.666592156	0.462231	25.63692586
0.022492	13.35288	2.80E-05	-1.19945	0.965998	1.752577953	0.401409	28.06957325
0.024308	13.73769	2.80E-05	-1.18431	0.970339	1.736051162	0.416398	28.24500919
0.020981	14.20206	2.10E-05	-1.10176	0.987075	1.718522407	0.421871	26.89012262
0.004993	-1.14122	0.907595	-1.96747	0.897046	-11.77241793	0.000584	-6.828511568

0.007927	-1.09683	0.934112	-2.14406	0.879132	-8.709836256	0.002633	-4.455678091
0.002299	-1.11681	0.89402	-1.9812	0.85464	-12.822502	0.000237	-7.228085371
4.00E-06	-1.42745	0.161281	-1.04464	0.986348	-2.795608645	0.000183	-3.820061282
1.50E-05	-2.60306	0.001204	-1.28648	0.878012	-2.939183622	0.000616	-5.947142419
1.00E-06	-3.39339	0.000293	-1.20714	0.928172	-2.895274004	0.001993	-8.138884365
0	-1.4154	0.16313	-1.10756	0.953422	-4.474322339	1.00E-06	-5.717946056
4.60E-05	-2.55613	2.50E-05	-1.04392	0.981533	-1.52224211	0.049351	-3.727344985
3.00E-06	-2.06713	0.000452	-1.1783	0.891405	-1.821501017	0.004587	-3.195537139
3.50E-05	-2.02414	0.001462	-1.21791	0.869674	-1.81575161	0.009383	-3.017749134
0.001237	5.183464	0.000145	1.080176	0.985452	2.13447945	0.083026	10.2427681
0.000386	4.48686	0.000125	1.090651	0.978275	2.135097858	0.051978	8.783639347
0.000677	5.667995	0.00014	1.120349	0.974833	2.041880082	0.126043	10.33014095
0.001062	5.06739	0.000114	-1.05429	0.991016	2.054888238	0.089116	10.97821416
0.000688	5.401045	8.20E-05	1.24874	0.932464	2.10994169	0.079958	9.125913954
0.001304	3.144584	0.02004	1.160398	0.970049	1.498024918	0.510677	4.059525737
0.927524	-3.90752	5.00E-05	1.283844	0.892901	1.33021154	0.446388	-3.771312002
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8.00E-06	-1.29863	0.516416	1.382708	0.868979	4.403783335	0.000179	2.452503586
0.000239	-2.85801	5.00E-05	1.026737	0.993266	-1.564051798	0.079375	-4.589599251
0.03781	4.851125	2.00E-05	-1.06275	0.986184	1.450590855	0.336008	7.478559465
0	-1.11469	0.666606	-1.00783	0.998132	-4.329431307	0	-4.788505665
0	-1.26428	0.436675	-1.07981	0.972402	-5.878965342	1.00E-06	-6.883302509
0	-2.07696	0.072049	-1.32359	0.906425	-9.650964365	4.00E-06	-15.14421633
0	-1.84261	0.102094	-1.22353	0.933035	-8.839323543	2.00E-06	-13.31186837
0	-1.96699	0.087592	-1.32981	0.902783	-9.450938869	3.00E-06	-13.97936997
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0.000104	2.19148	0.000659	-1.19161	0.89611	1.831569988	0.010226	4.782929439
8.40E-05	2.205602	0.000416	-1.11044	0.943363	1.807086362	0.00934	4.425887907
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9.10E-05	2.361161	0.000374	-1.15278	0.922599	1.867558111	0.010709	5.083313426
2.90E-05	2.453995	0.00028	-1.12745	0.938819	2.011471027	0.005229	5.565244195
0.006561	4.111641	0.008644	1.645459	0.867154	2.546219017	0.108212	6.362443146
0.004067	4.282648	0.007793	1.796433	0.846883	2.728086219	0.08681	6.503683242
0.00466	4.356017	0.006769	1.711448	0.860437	2.630295994	0.097946	6.694688416
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1.00E-06	-1.29447	0.335266	1.437743	0.781396	3.01824558	8.20E-05	1.621738215
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3.00E-06	-2.2025	0.002532	-1.07486	0.972674	-3.016179543	0.00014	-6.180462986
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0.000247	-4.42967	0.000113	-1.01074	0.998959	-2.418119761	0.020577	-10.59761502
1.40E-05	1.464658	0.27066	1.614696	0.781396	4.74220534	3.60E-05	4.301555805
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0.782571	-11.1539	1.90E-05	1.759384	0.838553	1.849534365	0.288249	-10.61027597
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3.00E-06	2.468889	0.000501	1.224914	0.892901	2.367319117	0.001372	4.771474891
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0.002018	1.922191	0.006116	1.206756	0.895309	1.703892337	0.033905	2.714058676
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0.003673	-3.87675	0.016792	1.25422	0.958696	5.56591794	0.004413	1.144708618
0.003823	-4.22246	0.011214	1.10751	0.986184	5.86437329	0.003448	1.254030974
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0.107852	4.940798	0.003666	1.393868	0.92398	1.918713024	0.299048	6.801197172
0.110818	4.565574	0.002724	1.52171	0.88724	1.756619899	0.333363	5.270371031
8.50E-05	1.637648	0.024445	-1.35315	0.786553	1.888688579	0.006225	4.185304251
5.10E-05	1.528237	0.037184	-1.44005	0.72298	1.913877421	0.002762	4.211944395
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0	1.09902	0.765234	-1.20887	0.901295	-5.517688643	0	-4.15310714
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0.0123	7.090471	1.30E-05	-1.11378	0.973772	1.534588898	0.360082	12.11894911
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0.004883	-7.31452	8.00E-06	-1.04837	0.991498	-1.306084953	0.593175	-9.11256316
0.902132	8.453908	0.426209	3.855565	0.932464	-2.844992118	0.778106	-1.297512628
0.892254	5.457401	0.426209	2.198335	0.962471	-3.014162189	0.71957	-1.214156562
0.998302	10.0267	0.286197	4.23806	0.909151	-2.52321887	0.744938	-1.06650798
0.903968	5.173135	0.517222	2.907013	0.936575	-2.928014254	0.762073	-1.645380566
0.98496	6.059205	0.37581	3.354788	0.913782	-2.407726365	0.752648	-1.333081015
0.001331	-2.53741	0.000171	-1.14112	0.932001	-1.705379431	0.031	-3.792105488
0.000127	3.465034	2.00E-05	1.117309	0.953222	1.715585809	0.051533	5.32043128
0.000187	3.81046	1.90E-05	1.22628	0.902783	1.651486787	0.096731	5.131717576
0.000113	3.495693	2.00E-05	1.130432	0.945725	1.728998448	0.049982	5.346669142

0.000113	3.516587	2.20E-05	1.181803	0.919239	1.75199662	0.04742	5.213263614
0.000209	3.475016	2.40E-05	1.125793	0.949772	1.745572692	0.048978	5.388106367
0.030795	1.487218	0.209239	1.173703	0.935692	1.699603252	0.104282	2.153594599
0.086456	6.327286	1.30E-05	1.210024	0.938431	1.27343729	0.621691	6.658880729
0.116474	4.892338	2.70E-05	1.196266	0.935824	1.24774079	0.621183	5.102853641
0.089032	5.990254	1.30E-05	1.232025	0.931641	1.271581978	0.611199	6.182585201
0.00079	3.530457	1.90E-05	1.20137	0.906953	1.646065634	0.078532	4.837278471
0	-1.20755	0.390433	1.137463	0.914998	3.817645265	0	2.779418834
0.001214	5.090303	0.000121	-1.38296	0.892663	2.117128798	0.0776	14.90395198
0.000822	5.107835	0.000126	-1.45075	0.867154	2.253209382	0.055703	16.69676351
0.001766	5.224835	9.30E-05	-1.34385	0.901484	2.025241922	0.097187	14.22006017
0.001599	5.380655	0.000153	-1.30495	0.917519	2.236090103	0.072434	15.70071766
0.001657	4.794975	0.000199	-1.52483	0.8501	2.281282327	0.051906	16.67963274
2.00E-06	1.109275	0.771226	1.460831	0.790735	2.872827492	0.000657	2.181466556
0.905092	1.76599	0.464196	1.851962	0.874533	-1.020524997	0.986452	-1.07020628
2.50E-05	-4.87183	0.000288	-1.22801	0.94183	-4.616864209	0.000737	-18.31624818
1.90E-05	-4.52158	0.000466	-1.16787	0.959794	-4.470968566	0.000867	-17.30995171
0.019367	2.273028	0.333686	1.018611	0.999217	-8.133094202	0.011344	-3.644678998
0	-1.24019	0.398396	-1.04675	0.983548	-3.847116835	3.00E-06	-4.55805605
0.003018	1.983131	0.177586	-1.21968	0.9573	1.726491449	0.338582	4.176003901
3.50E-05	1.186672	0.805645	-1.31179	0.940179	-14.88358763	2.30E-05	-9.561177506
0	3.005223	0.000386	1.001725	0.99992	3.698252362	1.00E-04	11.09493881
0.054382	3.119951	0.000238	-1.18569	0.930744	1.755668256	0.073907	6.494723343
0.001986	-3.17062	1.00E-04	1.018322	0.996324	-1.926994606	0.02502	-6.221710987
0.002007	3.600634	1.50E-05	-1.02588	0.994762	1.594856957	0.100072	5.89112364
0.006465	5.159021	2.00E-06	1.024112	0.994784	1.41889304	0.28312	7.147752872
1.00E-06	-1.50112	0.370905	-1.15774	0.962648	-6.795538012	5.40E-05	-8.811041572
0	1.097406	0.628672	-1.19519	0.843672	-3.454230701	0	-2.633573883
0.012006	5.714782	0.000281	1.544276	0.866265	2.610700448	0.048373	9.661215811
3.00E-06	-1.58205	0.295647	-1.51746	0.85777	-7.879195894	1.80E-05	-8.21460551
4.00E-06	-1.5602	0.323587	-1.63429	0.825112	-8.740634307	1.20E-05	-8.344385974
1.90E-05	-4.29942	0.001665	-1.19286	0.959675	-4.233393651	0.00295	-15.25842542
0.022876	3.504148	6.20E-05	1.205075	0.914998	1.38519088	0.332403	4.027893993
0.100582	-3.26929	0.000139	1.312364	0.867154	-1.183132063	0.669634	-5.076222666
0.082554	-2.93617	0.000135	1.290122	0.865333	-1.253565758	0.491278	-4.748533743
0.067893	-3.29945	0.000103	1.235193	0.902662	-1.206565037	0.617363	-4.9173044
0.061324	-3.21923	8.00E-05	1.210816	0.906953	-1.25851665	0.501642	-4.905565007
0.054683	-3.13433	7.70E-05	1.216426	0.902783	-1.228355713	0.545012	-4.683330901
0.141534	3.263434	9.90E-05	-1.10342	0.963363	1.263599785	0.507597	4.550140105
0.18337	11.37492	1.00E-06	1.091565	0.979289	-1.184103791	0.753949	8.800533428
0.152713	11.62896	1.00E-06	1.246645	0.929858	-1.162539566	0.78346	8.023987612
0.152247	1.374684	0.57096	1.298523	0.934626	1.323731722	0.667351	1.401371606
0.04316	2.038429	0.007764	-1.56486	0.741106	1.458056507	0.205787	4.65100324
0.619186	3.937996	0.012247	-1.49066	0.902783	1.271741572	0.756701	7.46540746
0.5285	3.950423	0.008779	-1.42103	0.910647	1.29289935	0.724092	7.257883689
0.592589	4.632388	0.006377	-1.43835	0.91415	1.257697184	0.775881	8.380055916
0.661862	3.923238	0.011139	-1.51758	0.897046	1.245796511	0.776451	7.417251563

0.540382	4.949541	0.007072	-1.58566	0.897046	1.297961421	0.756188	10.1867543
0.000117	-3.94066	0.002761	-1.40484	0.901295	-3.781134951	0.00565	-10.60632877
0.999009	1.87505	0.382082	-1.09253	0.99087	-1.17674942	0.870406	1.740860519
0.49591	-4.14064	9.00E-06	1.257968	0.892312	1.652549798	0.095749	-3.151976306
0.31047	-3.85607	1.00E-05	1.30066	0.862463	1.640530156	0.086458	-3.057202626
0.34576	-3.94729	8.00E-06	1.311618	0.858982	1.608112729	0.100863	-3.219513662
0.423956	-4.25452	8.00E-06	1.29706	0.868104	1.701402376	0.079137	-3.243423862
0.93456	7.031298	0.300014	6.352187	0.763576	-1.157814262	0.959689	-1.045987953
0.752035	2.384803	0.216404	-3.42459	0.721031	-1.223299456	0.84075	6.676179618
2.30E-05	-1.40007	0.29533	-1.15155	0.945084	-3.429012975	0.00022	-4.169044259
2.60E-05	-1.52442	0.202179	-1.19774	0.931768	-3.508803153	0.000332	-4.465828001
1.30E-05	-1.28612	0.388614	-1.11094	0.958859	-3.240826611	9.20E-05	-3.751865379
3.30E-05	-1.44924	0.261882	-1.1374	0.955418	-3.521666768	0.000267	-4.487205456
3.30E-05	-1.41217	0.303529	-1.15185	0.947636	-3.425496975	0.000348	-4.199680618
0.683376	6.239671	0.000128	-1.012	0.999021	-1.567835625	0.400998	4.02754721
0.944837	2.514482	0.436734	2.35128	0.820444	-1.103594037	0.954939	-1.031965309
1.00E-06	-2.69717	0.0027	-1.29068	0.897046	-3.927874948	0.000179	-8.208210415
1.00E-06	-2.52984	0.005551	-1.12215	0.96351	-3.848700591	0.000267	-8.676738255
1.00E-06	-2.75253	0.003349	-1.28818	0.902662	-3.87574737	0.000334	-8.281503878
1.00E-06	-2.6549	0.00301	-1.24238	0.911444	-3.805408067	0.000225	-8.131967805
1.80E-05	1.98831	0.002739	-1.0095	0.998132	1.823673492	0.01214	3.660470995
0.957415	2.247909	0.232677	2.171629	0.892901	-1.036902099	0.97284	-1.001716101
0.959264	6.129476	0.286843	6.357743	0.827387	-1.013914349	0.995662	-1.051673352
0.637129	5.604418	0.000682	-1.31592	0.932464	-1.051010979	0.95063	7.01701451
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5.60E-05	3.143564	5.10E-05	-1.03961	0.98986	2.153648683	0.005442	7.038328337
3.00E-06	1.413269	0.201357	-1.02215	0.994784	2.91311978	0.000215	4.208205802
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4.10E-05	3.759441	0.000196	-1.27428	0.904724	2.002266369	0.052407	9.592021317
1.00E-06	2.16875	0.010468	-1.10014	0.967392	3.678945143	0.000128	8.777674687
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0.836855	4.030987	0.000819	1.002927	0.99992	-1.287935643	0.636077	3.120669554
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9.00E-06	2.441055	0.000609	1.166441	0.923049	2.403342197	0.001226	5.02956491
5.00E-06	1.951475	0.1438	1.081449	0.986348	4.724801165	0.001213	8.525903579
0.077327	4.665275	0.001158	1.014822	0.998629	1.166469967	0.822341	5.362420728
0.630418	3.094618	0.016732	-2.90665	0.628413	1.02081484	0.979751	9.182196172
0.592517	2.653453	0.025556	-2.72596	0.623372	1.018030135	0.981593	7.36363162
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0.028558	-3.26421	5.00E-06	1.445203	0.741217	1.947448321	0.004616	-2.422376229
0.023491	-3.18686	6.00E-06	1.532687	0.702573	1.986825001	0.003617	-2.458420234
0.029415	-3.25047	6.00E-06	1.432437	0.746029	1.894596598	0.007225	-2.457562998
0.01713	-3.11641	7.00E-06	1.556073	0.685948	1.942980215	0.004314	-2.495835865
8.00E-06	-3.38959	5.00E-06	1.531588	0.720249	3.318689335	1.10E-05	-1.564309786
2.10E-05	3.591092	6.60E-05	-1.15721	0.94183	2.605232429	0.002488	10.82642935
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5.70E-05	1.714074	0.076642	-1.18649	0.931768	-4.232824223	3.50E-05	-2.081316531
8.10E-05	1.165644	0.700304	1.256598	0.906425	2.33859944	0.014159	2.169329577
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7.00E-06	1.234643	0.58176	1.138501	0.959379	2.507190453	0.008321	2.718912393
0.000143	-2.9464	0.000197	-1.13172	0.94883	-2.02493727	0.015162	-5.271854672
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1.00E-06	2.168155	0.001114	-1.03045	0.991236	2.63151204	0.000184	5.879279768
0.002548	2.902285	0.000281	1.026004	0.994784	2.285157363	0.005412	6.464087468
0.002444	2.796199	0.000502	-1.18465	0.928011	2.17900592	0.009693	7.217975041
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0	3.745307	7.40E-05	-1.10127	0.967965	3.638419708	0.000185	15.00701471
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1.00E-06	1.228187	0.632063	-1.01044	0.998959	-10.52771978	1.00E-06	-8.483183482
0.041958	6.244195	9.00E-06	-1.4511	0.85359	1.383045679	0.460693	12.53170102
7.00E-06	1.847175	0.003568	1.023536	0.993166	2.593660791	6.40E-05	4.680777314
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4.00E-06	4.057914	0.000143	1.154132	0.955418	3.53172861	0.000804	12.41751948
8.00E-06	4.280312	0.000112	1.105808	0.971906	3.133848729	0.002412	12.13036209

1.60E-05	3.757818	0.000397	-1.1014	0.973968	2.825991548	0.006296	11.69638194
9.90E-05	2.854745	4.10E-05	1.057869	0.97803	1.773946645	0.020307	4.787138911
0.025189	-2.63844	0.199035	1.69893	0.907594	3.90594815	0.079244	-1.147616815
1.20E-05	1.873063	0.007885	1.126851	0.938819	2.580417901	0.000284	4.289195107
3.20E-05	1.105978	0.361652	1.117794	0.845397	-1.061900087	0.69523	-1.073244774
1.20E-05	-1.85544	0.070521	1.158285	0.951694	-3.581101915	0.000587	-7.696247885
3.20E-05	1.833449	0.005328	1.086057	0.959742	2.022117912	0.002345	3.413678762
0.001731	8.172273	0.001097	-1.2321	0.965281	3.557852761	0.057469	35.82434414
0.0016	9.619824	0.000661	-1.00675	0.999807	3.460576103	0.070898	33.51487974
0.086104	4.287072	4.20E-05	1.074858	0.980029	1.263111096	0.575662	5.037917636
0.02377	-5.54798	0	1.192077	0.90573	1.214540294	0.537362	-5.445368207
0.002828	-4.20729	0	-1.0541	0.973109	1.2017955	0.424043	-3.321172661
0.013841	4.772725	9.00E-06	1.056344	0.986348	1.437258958	0.309664	6.493754352
0.010826	5.050866	7.00E-06	1.142173	0.953197	1.400325425	0.359016	6.19245484
0.00077	-1.58483	0.274468	1.064619	0.98922	3.442308036	0.003332	2.040195275
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0.00024	-1.4289	0.384833	1.200294	0.943125	3.435139967	0.002045	2.002886117
0.000186	-1.38111	0.414449	1.199897	0.938579	3.159102523	0.002605	1.906298907
0.000252	-1.50224	0.305892	1.124884	0.966793	3.374886395	0.002091	1.997160723
8.00E-05	5.951113	0.000381	1.774693	0.821716	2.518986878	0.072602	8.446970555
0.000217	3.714554	0.000563	1.422511	0.865333	1.768923262	0.157626	4.61912721
0	3.613837	8.80E-05	1.036991	0.991601	3.134532718	0.000603	10.92361089
1.00E-06	3.597695	0.000116	1.005689	0.999257	3.203575962	0.000607	11.46029665
0.000114	3.333381	6.00E-06	-1.1518	0.922599	1.605757141	0.052886	6.165147346
0.000161	3.64416	6.00E-06	-1.02432	0.994608	1.555570703	0.094758	5.806603713
0.000122	3.395529	5.00E-06	-1.17791	0.905428	1.560218604	0.072294	6.240316872
0.000109	4.005423	7.00E-06	-1.02154	0.995618	1.693377109	0.067035	6.92879261
7.30E-05	4.248444	6.00E-06	-1.16201	0.933035	1.7507529	0.054904	8.642968674
4.00E-06	-1.43692	0.102741	-1.31074	0.80731	-2.760208966	5.10E-05	-3.025932452
3.30E-05	2.896032	7.10E-05	-1.11583	0.950255	1.935503446	0.011788	6.254560571
2.10E-05	3.063931	7.40E-05	-1.11688	0.95344	1.973480646	0.014164	6.75334251
0.086184	-3.70758	1.00E-05	1.363579	0.822355	1.805501146	0.032584	-2.800100931
6.00E-06	-2.07605	0.013946	-1.12832	0.959675	-3.124361886	0.00028	-5.748651692
2.00E-06	-1.94099	0.010439	-1.10454	0.960892	-3.113515857	0.000112	-5.471331901
3.00E-06	-2.0093	0.01512	-1.08779	0.975199	-3.15440157	0.000205	-5.826641737
1.00E-06	-1.95754	0.007103	-1.06759	0.975104	-3.108565772	6.50E-05	-5.699896825
2.00E-06	-2.49724	0.003472	-1.12878	0.959653	-3.516124109	0.000261	-7.778852685
0.006786	-2.61868	0.096281	-1.09521	0.989064	-3.009875991	0.070287	-7.196675836
0.373746	-1.04103	0.967364	-3.94263	0.694332	1.121578113	0.915613	4.247706712
0.310024	1.884202	0.5003	-3.02028	0.790735	-1.404247197	0.775881	4.052576223
0.286094	1.830942	0.514471	-3.04011	0.786553	-1.416447636	0.764757	3.929735723
0.293257	1.876371	0.519142	-3.31603	0.786553	-1.421017844	0.775787	4.378622481
0.299991	1.785034	0.546574	-3.20181	0.786553	-1.357260315	0.803532	4.21093402
0.263867	1.880264	0.523635	-3.36889	0.786553	-1.41436747	0.782503	4.478613878
0.010881	-4.67219	7.20E-05	-1.104	0.972832	-1.877331558	0.101809	-7.945002764
0.000165	-1.91078	0.003074	-1.15317	0.912031	-1.988763009	0.002893	-3.295330417
0.028202	6.500806	0.000717	1.728701	0.85777	1.641996387	0.446251	6.174751153

0.002268	-3.02949	4.90E-05	-1.17853	0.912753	-1.543500354	0.109793	-3.967685661
0.886188	-3.39833	0.000103	1.449191	0.802571	1.198097878	0.644306	-4.110540928
8.90E-05	-3.60517	0.000261	-1.36619	0.867154	-2.822918042	0.003566	-7.449275101
0.607394	-4.35515	3.20E-05	1.356399	0.866265	1.512821267	0.256639	-3.904836254
0.4198	-4.50597	3.20E-05	1.464819	0.827387	1.600278434	0.200047	-4.124547767
0.320313	-3.84723	9.00E-06	1.329237	0.847993	1.562554551	0.122173	-3.272772579
0.276845	-3.88402	7.00E-06	1.350042	0.833094	1.631703839	0.083215	-3.213569087
0.41491	-4.28127	6.00E-06	1.2546	0.892901	1.700935354	0.074792	-3.157835974
0.456579	-4.11842	8.00E-06	1.205556	0.909162	1.57689968	0.13063	-3.148576071
0.291176	-3.8394	1.00E-05	1.326978	0.849467	1.553652158	0.129589	-3.27924116
0.938305	5.37158	0.002868	-1.83831	0.844838	-2.030399504	0.264254	4.863385963
0.96922	5.683318	0.002505	-1.82922	0.848371	-2.08742728	0.252812	4.980323255
0.000213	-1.69084	0.026199	-1.2098	0.892901	-2.039639221	0.004531	-2.850634104
4.00E-06	1.940326	0.001608	-1.02359	0.992928	2.116935348	0.000805	4.204449294
0.000106	-1.25264	0.574547	-1.70655	0.757135	-2.854211357	0.00435	-2.095056687
3.00E-06	-1.91952	0.001734	-1.06247	0.970697	-2.092850739	0.000864	-3.781066519
0.0063	-4.64952	0.001485	1.120006	0.978121	-2.405205993	0.084236	-12.5250924
0.155918	6.180027	0.00012	-1.17037	0.962648	1.236667034	0.732001	8.944689188
0.188845	6.265714	0.000168	-1.1465	0.970623	1.283638326	0.691247	9.221217628
0	3.164047	0.000403	-1.02588	0.99523	2.949268961	0.001306	9.573098334
0	2.957494	0.000694	-1.05736	0.986184	2.746693181	0.002264	8.58925111
0.121426	-3.63178	2.60E-05	1.029238	0.994073	1.068616358	0.876206	-3.49794465
0.093713	-3.55066	2.20E-05	1.042642	0.989493	1.008496196	0.98534	-3.670877325
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1.60E-05	-1.55697	0.053554	-1.37382	0.786553	-2.903568809	4.80E-05	-3.290650119
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2.00E-06	-1.31875	0.248816	-1.19272	0.897046	-3.082607303	2.20E-05	-3.408324276
0.050254	-2.25916	9.70E-05	-1.62047	0.588188	2.324485681	0.000123	1.667325073
1.00E-05	-3.54656	0.006157	-1.02226	0.998057	-4.184475139	0.003514	-14.51738006
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0.484697	-6.27794	6.50E-05	1.968681	0.746029	1.69188871	0.279146	-7.305009894
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3.30E-05	-2.45593	0.067202	-1.41744	0.905139	-4.465394559	0.003866	-7.736993298
0.953615	5.022964	0.002865	1.051448	0.994784	-1.32953202	0.697651	3.593133801
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0.256306	-4.97098	9.80E-05	1.714861	0.786553	1.976289731	0.100585	-4.313407401
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0.001382	3.006484	0.000101	1.127563	0.947636	1.972036763	0.015094	5.258152601
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0.033355	1.920596	0.113067	1.152318	0.962975	1.186298178	0.767447	1.977231521
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4.80E-05	-3.12292	3.50E-05	-1.07523	0.970924	-1.831552849	0.022363	-5.319608249
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0	1.330744	0.258875	1.363596	0.796101	4.289067038	1.00E-06	4.185735059
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5.00E-06	1.899993	0.006291	-1.3018	0.835024	2.177344388	0.001927	5.385485897
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1.10E-05	-1.64088	0.075807	-1.08835	0.968662	-3.00613432	0.000343	-4.532291062
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6.00E-06	2.072103	0.113496	-2.25911	0.72298	-9.386104481	2.20E-05	-2.005100564
9.00E-06	1.640231	0.169028	-1.97326	0.702573	-6.598643014	8.00E-06	-2.03875518
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0.350005	2.705088	6.80E-05	-1.36222	0.790646	1.103093063	0.766354	4.064823322
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2.00E-06	2.695605	0.000536	1.08213	0.9718	2.927513863	0.000408	7.292486354
3.00E-06	2.584893	0.000981	1.062055	0.981489	2.97445554	0.000418	7.239408839
0	1.480662	0.048818	1.143146	0.909373	3.056416099	4.00E-06	3.958830671
0.001365	2.318191	0.003223	-1.00913	0.998629	2.025074539	0.018096	4.737362959
0.000186	2.815468	0.001431	1.206846	0.928246	2.420438927	0.008611	5.646676282
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0.898982	2.100329	0.449872	1.497851	0.946834	-1.255273575	0.865254	1.117069767
3.00E-06	1.332131	0.316265	-1.4392	0.786553	-4.322856239	5.00E-06	-2.254774773
1.70E-05	1.414807	0.24963	-1.36323	0.845397	-4.296128291	1.50E-05	-2.227465914
8.00E-05	1.997298	0.003576	1.081145	0.965281	2.167201427	0.002135	4.003668599
0.028634	3.793973	0.000287	1.308037	0.898183	1.468961329	0.349247	4.260734043
0.003925	4.121253	2.00E-05	1.072753	0.978275	1.358134354	0.385589	5.217615959
0.003769	4.129946	1.80E-05	1.127088	0.9573	1.424083823	0.298197	5.218217467
0.147784	-2.43466	0.000191	1.125686	0.935824	1.170431275	0.588629	-2.341578838
0.19134	-3.6521	0.000431	1.078779	0.981533	1.141710059	0.797775	-3.450798352
9.30E-05	2.625466	0.007022	1.441715	0.857336	2.431672885	0.018496	4.428250938
0.00094	3.468873	0.041557	-1.02323	0.998132	2.466164577	0.180579	8.753525187
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4.00E-06	-1.07512	0.800033	-1.32059	0.80731	-2.644949184	0.00012	-2.153311966
0.978358	2.263567	0.353748	2.005473	0.882227	-1.203862554	0.912168	-1.066597256
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0.306994	-5.3124	5.50E-05	1.546823	0.832575	1.812059359	0.156043	-4.534807283
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1.90E-05	-1.66985	0.377281	-1.6464	0.866867	-10.224139	0.000103	-10.36980308
0.000347	2.986942	0.000316	1.257484	0.895502	1.98522407	0.025405	4.715566638
0.928057	1.694692	0.46117	1.721542	0.883799	-1.0758531	0.95348	-1.092898603
0.028093	2.705691	0.000161	-1.01341	0.997602	1.229322647	0.504788	3.37077698
0.078886	3.312085	3.80E-05	1.038127	0.990445	1.304902687	0.400837	4.16321741
0.965684	2.453357	0.382786	2.272329	0.877001	-1.115184958	0.941308	-1.032897646
0.979914	2.36821	0.301106	2.284541	0.862463	-1.033668116	0.977103	1.002859523
4.90E-05	-3.52779	0.001602	-1.71693	0.786553	-2.887051244	0.010498	-5.932063789
0.016447	-5.63151	8.00E-06	1.807524	0.726575	2.60045115	0.007584	-3.914357277

0.006658	-4.77119	5.00E-06	1.666942	0.727235	2.583329598	0.002472	-3.078699938
0.96922	-7.13112	0.000171	1.18492	0.963761	1.332932901	0.665067	-6.33926047
0.327061	-5.35557	9.00E-06	1.593369	0.786553	1.757207063	0.114397	-4.85622487
0.22318	-3.62137	4.00E-05	1.534519	0.7738	1.631647529	0.114301	-3.405799215
0.26726	-3.58758	2.50E-05	1.364542	0.833302	1.566161806	0.13313	-3.125730222
9.80E-05	1.065312	0.902081	-1.49148	0.8501	-5.97094017	4.50E-05	-3.757936438
0.000173	-1.00064	0.998972	-1.49152	0.858982	-6.178963208	5.70E-05	-4.14535346
9.60E-05	-1.03504	0.949046	-1.59767	0.811524	-5.931915045	5.00E-05	-3.842962693
0.000114	1.035313	0.945043	-1.45441	0.850151	-5.108606501	6.40E-05	-3.392687314
0.000103	1.042531	0.939905	-1.5572	0.836653	-6.400865555	4.40E-05	-3.942804628
0.670227	-4.00108	6.00E-06	1.258461	0.879215	1.408929094	0.253922	-3.573781927
0.4743	-6.22374	0.000178	1.792649	0.800675	1.674271764	0.337372	-6.663783553
0.52095	-6.86898	0.000227	1.763495	0.833094	1.779120506	0.316423	-6.808655773
0.002645	-2.8665	0.000386	-1.15963	0.936848	-1.893156772	0.033933	-4.679718882
4.10E-05	2.119079	0.004147	-1.02633	0.994458	2.399344706	0.001712	5.21828299
5.80E-05	2.036904	0.005859	-1.08934	0.965281	2.446240417	0.001253	5.427911009
6.00E-05	1.906838	0.010784	-1.16389	0.926942	2.461850746	0.000998	5.463688559
0.000153	1.920698	0.011231	-1.16799	0.926197	2.322724066	0.002209	5.21067853
5.70E-05	2.098927	0.005062	-1.07054	0.975546	2.310329485	0.002848	5.191266316
1.20E-05	-2.46977	0.001933	-1.50687	0.786553	-2.58906452	0.00196	-4.243499839
1.50E-05	-2.34024	0.002825	-1.41696	0.807431	-2.523480608	0.002121	-4.167753238
1.70E-05	-2.90686	0.002052	-1.22787	0.926206	-3.038116096	0.00228	-7.192457359
2.10E-05	-2.78694	0.003218	-1.14387	0.959653	-3.045364974	0.002476	-7.419773094
1.60E-05	-2.87614	0.00258	-1.18934	0.939287	-3.03716425	0.002645	-7.344659519
1.40E-05	-2.93013	0.002059	-1.21615	0.931768	-2.959194566	0.003033	-7.129714165
1.80E-05	-2.72202	0.003572	-1.08713	0.977792	-3.094668084	0.001967	-7.748631416
0.000409	2.326831	0.000924	-1.13842	0.936503	1.810906641	0.023393	4.796929667
0.000168	2.422283	0.000778	-1.15618	0.931768	1.983867507	0.011152	5.556015478
0.000847	2.327766	0.000983	-1.075	0.970924	1.820742053	0.023089	4.556143262
0.012459	-8.10021	0.000153	-1.08513	0.98929	-1.670539742	0.410127	-12.47016762
0.01231	-7.07051	0.000211	-1.00544	0.999791	-1.724289781	0.35346	-12.12560117
0.012377	-8.14104	0.000156	-1.06971	0.991236	-1.690872717	0.399714	-12.86835716
0.014373	-8.12875	0.000177	-1.12052	0.981489	-1.699841894	0.39962	-12.33145639
0.006367	-7.77603	8.60E-05	-1.10185	0.983195	-1.709588372	0.345607	-12.06493873
0.000282	1.509393	0.066027	-1.05429	0.978275	2.227580307	0.000884	3.544837902
0.061925	3.607728	0.000142	1.215277	0.922599	1.236848601	0.606864	3.671766285
0.024449	2.79913	0.000225	-1.18237	0.918229	1.256545743	0.484688	4.15866839
0.00221	-3.47701	0.005152	-1.19105	0.959324	-3.433100645	0.008553	-10.02214163
0.003433	1.5105	0.186843	-1.10097	0.96616	2.045224944	0.024126	3.401226498
7.80E-05	-2.21456	0.000213	-1.13513	0.920528	-1.676068653	0.016363	-3.269884991
5.40E-05	-2.21535	0.000241	-1.18975	0.885574	-1.726070155	0.012158	-3.213995801
0.992434	-4.17852	1.40E-05	1.329451	0.863103	1.219946204	0.600347	-4.553593529
0.008441	2.862131	6.00E-05	-1.20697	0.897046	1.321381	0.319775	4.56470569
0.012239	-1.55486	0.119342	1.135645	0.947001	-1.804988698	0.044889	-3.187197221
0.048827	-3.29875	4.00E-06	-1.00675	0.998933	-1.231126932	0.434435	-4.033935766
0.317998	-5.29117	0.000148	1.735426	0.790735	1.74966878	0.229888	-5.248095499
0.695161	1.905826	0.479013	1.788234	0.904744	-1.380227138	0.783128	-1.295065371

0.714668	1.879744	0.486733	1.687441	0.91415	-1.40060706	0.770073	-1.257321346
0.740461	1.797093	0.471104	1.620215	0.911444	-1.340549816	0.778616	-1.208606945
0.623152	-6.51628	1.00E-06	1.061606	0.982669	2.465848886	0.003626	-2.80541188
0.403171	-7.59459	1.00E-06	1.183938	0.927228	2.640087447	0.001112	-3.405770296
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1.00E-06	-2.2459	0.00239	-1.38753	0.806153	-2.477619438	0.001341	-4.010355927
0.187378	-4.7461	5.40E-05	1.523507	0.822485	1.955134319	0.077926	-3.698317562
4.00E-06	2.952101	7.50E-05	1.06187	0.978275	2.416367686	0.001259	6.717739335
8.10E-05	1.959301	0.061045	-1.84846	0.730776	2.743974198	0.007547	9.937822678
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0.007197	2.711482	0.063853	-1.29648	0.943655	-3.277732963	0.035726	1.072506014
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0.002287	3.592902	0.002062	-1.33136	0.905846	-3.34296292	0.005395	1.430897253
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0.28144	12.04426	3.30E-05	-1.88405	0.827387	-3.106677772	0.0501	7.304263047
0.091115	6.140234	0.000557	-1.77581	0.833683	-2.874444515	0.050104	3.793382207
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8.00E-06	-1.3368	0.537931	-1.18494	0.955418	-8.713626681	1.00E-05	-9.830349851
7.00E-06	-1.31758	0.539767	-1.15565	0.960212	-7.835220878	1.10E-05	-8.933140806
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0.0301	1.876422	0.159531	-1.80681	0.786553	1.795918403	0.230501	6.088783265
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0.031329	1.876154	0.162592	-1.8815	0.785684	1.818184512	0.222215	6.418172797
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0.518806	2.74313	0.039849	-2.30918	0.733879	-1.826398229	0.282915	3.468241313
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0.365258	5.719572	0	1.006956	0.998994	-1.201234225	0.576452	4.72852024
0.994456	1.337758	0.623182	-2.33538	0.740886	-1.10238067	0.901252	2.834022466
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0.005599	9.697649	0.000667	1.074324	0.993225	2.593647171	0.182892	23.41219115
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0.000823	2.351196	0.000258	-1.0759	0.965281	1.331661447	0.258123	3.36864802
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0	1.31699	0.21025	1.241249	0.855551	2.858986738	2.00E-05	3.033442551
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0.433335	1.013573	0.989835	-3.98419	0.716291	1.083953307	0.947397	4.37729178
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0.385352	-4.31931	0.013811	1.177988	0.97311	-1.767158752	0.426762	-8.991464232
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0.918559	3.855231	0.001738	-1.54164	0.857336	-2.16423632	0.08974	2.746180742
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0.003706	3.654441	1.90E-05	-1.00176	0.99992	1.104356899	0.803372	4.042920232
0.012527	13.9344	2.30E-05	1.4004	0.926528	1.070526617	0.940741	10.6520612
0.964442	2.343425	0.5003	2.32576	0.899704	-1.200227178	0.917513	-1.191179594
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0.152913	5.340761	6.00E-06	1.01592	0.998057	1.156258405	0.748729	6.078529108
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1.00E-06	1.332711	0.354493	1.270848	0.885574	3.717668627	5.60E-05	3.898640533
1.00E-06	1.245599	0.457884	1.224112	0.898237	3.246744762	8.70E-05	3.303736162
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0.057846	2.427838	0.000997	-1.23596	0.892901	1.400865915	0.258591	4.203577122
0.020981	2.504919	0.00053	-1.18777	0.909424	1.429127683	0.211316	4.25204553
0.024273	2.502531	0.000626	-1.39892	0.797172	1.396437864	0.256866	4.888720721

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0.004126	-4.75194	0.000114	-1.52114	0.841945	-2.041149251	0.078319	-6.376391637
0.000302	-2.39812	0.022252	-1.1119	0.972934	-2.6455574	0.016114	-5.705845696
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0.000302	2.564267	0.000203	1.061889	0.976769	1.662620049	0.046224	4.014922777
4.50E-05	1.707842	0.11189	-1.74966	0.736924	-3.521431177	0.000502	-1.178469268
0	2.978552	0.000713	-1.09362	0.971526	4.181994499	6.10E-05	13.62244137
0.021655	-2.54358	6.90E-05	1.053519	0.97803	-1.157441641	0.604547	-3.101610043
0.003541	2.661029	8.40E-05	-1.06167	0.975904	1.422567584	0.167577	4.018933462
0.001139	2.882505	3.00E-05	1.038862	0.987492	1.493597652	0.107224	4.144250171
0.264192	2.13521	0.202612	2.118859	0.794055	1.613516355	0.499068	1.625968093
0.015503	2.276138	0.01307	1.034699	0.994073	1.692242005	0.147254	3.722605826
0.022145	2.197505	0.013769	1.134721	0.959071	1.556321812	0.216928	3.013979084
0.019754	2.271497	0.010066	1.082534	0.977069	1.582818161	0.195078	3.321250982
0.016028	2.156093	0.014103	1.043336	0.99087	1.666747143	0.13462	3.444396033
1.00E-06	1.876728	0.014541	-1.07969	0.970343	-4.075619685	6.00E-06	-2.011382136
1.00E-06	1.707385	0.047434	-1.21933	0.902662	-4.126204731	1.00E-05	-1.981978205
2.00E-06	1.828001	0.032602	-1.20158	0.91415	-4.283778997	1.40E-05	-1.95028253
2.00E-06	1.69529	0.058899	-1.1823	0.926206	-3.907068156	2.60E-05	-1.949301103
2.00E-06	1.83129	0.023468	-1.14732	0.938116	-4.12781497	9.00E-06	-1.964627693
0.00045	1.898636	0.262259	1.243722	0.9573	-5.968962842	0.001948	-3.910032342
0.000372	1.848833	0.254774	1.26545	0.946198	-5.505107844	0.001786	-3.768019714
0.000424	1.750891	0.31998	1.152664	0.973224	-5.725228999	0.001801	-3.769089901
0.746246	4.405336	0.015752	-2.81414	0.740886	-2.729133658	0.134058	4.542556701
0.450518	3.956537	1.80E-05	1.170684	0.933035	1.102757987	0.817628	3.726969657
0.400317	5.106144	1.80E-05	1.201468	0.934182	1.115677844	0.827639	4.741542092
0.425431	3.835366	1.40E-05	1.207944	0.907819	1.097860855	0.817628	3.485839015
3.00E-06	-1.09858	0.860133	-1.12209	0.972111	-6.727110529	4.50E-05	-6.586161137
3.00E-06	-1.0912	0.87922	-1.15915	0.964212	-7.516743189	5.10E-05	-7.076132388
2.00E-06	-1.03492	0.95087	-1.08043	0.983982	-6.782990946	3.20E-05	-6.497282677
4.00E-06	-1.0036	0.995382	1.032862	0.995876	-7.176520717	5.80E-05	-7.439068976
2.00E-06	-1.02752	0.964575	-1.05786	0.991236	-7.651780721	4.00E-05	-7.432318288
0	1.187754	0.715944	-1.54742	0.833683	-9.694836044	2.00E-06	-5.274811255
0	1.275489	0.582815	-1.44875	0.862983	-8.577064812	4.00E-06	-4.641617148
0.059787	3.085095	4.00E-06	-1.21512	0.866867	1.078335304	0.803555	4.042408228
0	1.08678	0.851098	-1.48035	0.827991	-7.508468811	2.00E-06	-4.667075091
0	1.114739	0.793617	-1.37314	0.864835	-7.175890302	2.00E-06	-4.687995477

0	1.008144	0.986904	-1.5392	0.799877	-6.984627663	3.00E-06	-4.501172108
0.011158	5.590514	2.20E-05	-1.23556	0.930171	1.469369763	0.371899	10.14955306
0.014822	5.210167	2.20E-05	-1.30806	0.897829	1.451661986	0.365805	9.893406356
0.008032	5.783237	1.30E-05	-1.09663	0.975904	1.505806009	0.323187	9.549934068
0.000663	3.06987	0.001124	-1.85326	0.721031	1.628459413	0.191525	9.264727479
0.000454	3.275279	0.000828	-1.77257	0.741217	1.646361136	0.193206	9.558200276
0.000296	3.282453	0.000639	-1.74075	0.741399	1.608266698	0.206051	9.189528928
0.003006	4.588989	1.90E-05	-1.19696	0.932001	1.749135202	0.104542	9.607720931
0.003093	4.500534	1.80E-05	-1.30388	0.88512	1.655861771	0.141683	9.716885689
0.008689	3.667278	6.00E-06	-1.12383	0.94486	1.303271588	0.363678	5.371296289
0.004305	4.132482	2.20E-05	-1.21505	0.91415	1.60155933	0.15267	8.041698523
0.003415	4.474291	2.20E-05	-1.23766	0.910151	1.676135974	0.135968	9.281870976
0.000989	3.976879	0.000178	-1.11853	0.965998	2.313252157	0.022605	10.2899722
7.40E-05	2.533477	0.000839	1.291802	0.866326	2.293111535	0.003913	4.497241939
0	-2.05282	0.002526	-1.06903	0.972068	-2.851850762	8.60E-05	-5.476322668
0.670513	2.55377	0.004909	-1.03532	0.994057	1.139842914	0.785263	3.013717333
8.00E-06	-2.02412	0.060909	-1.32276	0.901484	-5.335849728	8.10E-05	-8.165005808
1.90E-05	-2.31881	0.043868	-1.26913	0.931768	-5.684096546	0.000185	-10.38537759
9.00E-06	-2.20662	0.049457	-1.3248	0.905846	-5.904073028	9.30E-05	-9.834007616
1.30E-05	-2.10388	0.061287	-1.22848	0.936575	-5.540726347	0.000118	-9.488954277
6.00E-06	-1.96539	0.055117	-1.27233	0.908176	-5.096676721	5.10E-05	-7.872937737
0.00018	2.50293	0.013327	1.079565	0.981891	-4.005459247	0.000603	-1.72763649
0.00299	2.56097	0.056539	1.081469	0.988977	1.501994533	0.504585	3.556793351
4.50E-05	-2.04314	0.000417	-1.26614	0.814497	-1.749092897	0.010209	-2.822476073
0.911141	-1.8685	0.699606	-4.62437	0.832123	-1.083528297	0.967202	2.284125685
0.134234	4.145331	0.004101	-2.12742	0.761956	-2.433770915	0.09304	3.623544946
0.174061	3.769527	0.007792	-2.23185	0.746029	-2.335702752	0.116026	3.601914394
1.00E-06	-1.78978	0.00761	-1.00966	0.998132	-2.384836581	0.000307	-4.227504705
1.00E-06	-1.81495	0.006599	-1.04684	0.981891	-2.453175251	0.000226	-4.253166959
9.10E-05	1.122374	0.885922	-1.30302	0.950743	-17.71698941	3.70E-05	-12.11433906
0.249864	1.385846	0.539921	1.035417	0.995876	1.031629881	0.968068	1.380776844
0.301932	1.314813	0.604288	-1.02873	0.996515	1.042770425	0.955109	1.410433981
0.283931	1.307407	0.596363	-1.01221	0.998959	1.054780573	0.939905	1.395869785
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0.004521	3.764695	7.10E-05	1.262724	0.900257	1.251228352	0.571461	3.730421259
1.00E-06	1.714206	0.064076	1.48182	0.786553	4.113044757	2.70E-05	4.75807045
0.00456	5.623406	0	1.004876	0.99922	1.354065628	0.30285	7.577510875
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3.00E-06	2.382217	0.000335	1.230916	0.872717	2.127914491	0.002291	4.118195243
9.00E-06	2.936063	0.000801	-1.75277	0.72298	2.19965496	0.016665	11.3199557
1.90E-05	2.966148	0.000599	-1.83573	0.716291	1.846473605	0.05913	10.05411952
1.90E-05	3.198257	0.000635	-1.60904	0.786134	2.02961116	0.042496	10.4446074
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0.000274	2.860237	0.001087	1.157286	0.945725	1.722249569	0.109301	4.256546032
1.00E-06	1.486518	0.172522	1.34068	0.850432	4.496427277	8.00E-06	4.985546551
7.00E-06	3.077744	2.00E-06	1.017824	0.994784	1.656439343	0.012469	5.008818941

0.000775	2.304197	0.001699	1.114586	0.955115	1.846921126	0.026157	3.818160394
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0	1.957541	0.000569	1.047478	0.9774	2.152314681	0.000245	4.022276112
0.448828	2.57849	0.000919	-1.30228	0.866265	1.1306416	0.755448	3.79660702
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0.000636	1.073535	0.955522	-1.24537	0.977792	-33.8694185	0.000391	-25.33330293
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1.00E-05	1.609412	0.07792	1.154457	0.934628	1.948510144	0.018064	2.716389588
9.00E-06	1.606993	0.075689	1.151901	0.935529	1.944751457	0.01722	2.713081422
4.50E-05	2.526548	3.00E-05	1.12426	0.929858	1.759838599	0.007955	3.954884583
2.40E-05	2.256875	4.60E-05	1.039972	0.981533	1.806259169	0.00252	3.919819479
0.023073	3.524951	2.70E-05	-1.00953	0.998307	1.438172585	0.235707	5.117822515
7.00E-06	1.90062	0.019186	1.415298	0.800675	2.713028915	0.000807	3.643359055
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1.00E-06	2.704788	1.80E-05	-1.1054	0.943919	2.033312673	0.001454	6.079356413
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7.60E-05	2.809861	0.000328	1.265886	0.882588	2.080708071	0.011726	4.618505529
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2.20E-05	3.204671	0.000135	-1.19118	0.92398	2.382021837	0.004432	9.092956853
0.001203	-3.2706	2.40E-05	-1.53085	0.740886	-1.54776268	0.110079	-3.306744083
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0.037018	8.869554	7.00E-06	-1.14319	0.96693	1.301875174	0.636796	13.20052403
0.031684	9.791675	5.00E-06	-1.02733	0.996625	1.348993334	0.590322	13.56995956
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0.001699	-3.47061	0.014888	-2.2131	0.754298	-4.643906919	0.004716	-7.282623024
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6.10E-05	2.510312	0.000244	-1.11218	0.949772	1.777592587	0.022483	4.962901768
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2.00E-06	-1.57183	0.031361	-1.06692	0.968512	-2.366989833	0.000225	-3.487163052
4.30E-05	-2.97503	0.000716	-1.60637	0.7656	-2.320252884	0.010768	-4.297158828
2.90E-05	-3.05094	0.000392	-1.59616	0.754947	-2.176794011	0.014737	-4.160776463
4.30E-05	-3.02468	0.000685	-1.59579	0.778608	-2.325002541	0.0114	-4.406839593
5.60E-05	-2.98758	0.000785	-1.62577	0.760742	-2.278319866	0.013724	-4.186716731
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5.00E-06	-2.19042	0.067999	-1.28855	0.928011	-7.165332022	5.40E-05	-12.18039348
5.00E-06	-2.33166	0.055833	-1.30143	0.927228	-7.077847976	8.90E-05	-12.68076618
0.746337	1.465658	0.832817	2.10618	0.935692	1.024569329	0.991996	-1.402560069
0.750861	1.547048	0.799344	2.114923	0.932521	-1.018176318	0.993857	-1.391918574
0.753432	1.580264	0.792901	2.132273	0.933035	1.016350694	0.994693	-1.327607113
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0.001238	7.076017	4.00E-06	1.176673	0.947636	1.664523537	0.201989	10.0097454
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7.80E-05	1.967284	0.000713	1.232029	0.846883	1.551718023	0.031936	2.477757333
2.50E-05	1.992661	0.000331	1.200295	0.859944	1.586748434	0.017381	2.634229216
0.003438	5.193148	1.00E-06	-1.05944	0.981891	1.207054551	0.601538	6.640980469
0.003695	5.258631	1.00E-06	-1.02624	0.994784	1.19245487	0.625113	6.435201549
0.006457	5.043676	1.00E-06	-1.01998	0.995876	1.226656708	0.554387	6.310461679
0.001508	5.245102	1.00E-06	1.150574	0.935711	1.2605692	0.477612	5.746534483
0.004682	4.909219	2.00E-06	-1.01013	0.998132	1.21517741	0.576111	6.025974035
1.70E-05	-1.15574	0.617334	1.121899	0.945725	-3.207514613	4.10E-05	-4.158930981
2.00E-05	-1.20554	0.492551	1.101605	0.958396	-3.235682152	2.90E-05	-4.297066584
1.80E-05	-1.26356	0.403193	-1.00859	0.998473	-3.312609034	4.20E-05	-4.150023715
1.00E-05	-1.20605	0.489788	1.044858	0.986184	-3.266673342	2.50E-05	-4.116504484
0.001444	2.533846	0.001342	-1.0533	0.986184	1.980456858	0.022538	5.285659476
2.00E-06	2.46034	0.000953	1.278211	0.867316	2.483093401	0.001434	4.779534054

0.000309	4.077054	0.000266	1.021276	0.997196	2.375437285	0.02576	9.483019989
0.000107	2.350866	2.60E-05	-1.23978	0.826493	1.732013339	0.004819	5.048038086
3.00E-06	1.916452	0.004696	-1.06852	0.970924	-4.093820065	1.00E-06	-1.999167174
2.00E-06	2.0141	0.002012	-1.01209	0.997602	-4.194438767	1.00E-06	-2.05766814
0.000244	2.645022	2.60E-05	1.080321	0.960209	1.601062315	0.033118	3.919987439
0	-1.17209	0.534047	-1.16089	0.911268	-3.661157588	3.00E-06	-3.696502643
0	-1.14635	0.597474	-1.15191	0.916799	-3.62723753	3.00E-06	-3.60972827
0	-1.21513	0.461246	-1.17116	0.911105	-3.714319508	5.00E-06	-3.853747687
0	-1.1478	0.589268	-1.15572	0.911888	-3.755868945	2.00E-06	-3.730122863
0.001852	-5.66782	3.40E-05	-1.34541	0.897046	-2.22931648	0.047348	-9.391426036
0.131246	4.821187	1.00E-06	-1.03563	0.99087	1.21823747	0.54728	6.082588664
0.079386	5.008802	1.00E-06	1.023608	0.994784	1.205808224	0.583831	5.900360448
0.106608	5.13555	1.00E-06	1.055872	0.982343	1.178362515	0.64208	5.731317182
0.090603	5.101858	1.00E-06	1.019125	0.996116	1.209089756	0.584269	6.05284343
0.096464	5.312184	1.00E-06	1.154664	0.937813	1.187554868	0.642379	5.463502633
0.008474	-2.69113	6.80E-05	1.033862	0.990124	-1.459680148	0.131409	-4.061206105
0.013472	-2.80468	7.00E-05	-1.08253	0.965281	-1.481702316	0.133578	-3.838863014
1.00E-06	-1.72757	0.10108	-1.10627	0.968537	-5.309354953	1.60E-05	-8.291197992
1.00E-06	-1.79773	0.089158	-1.13531	0.959841	-5.297285763	2.60E-05	-8.38808767
0.004174	-3.94364	0.023868	1.31883	0.947367	6.046238848	0.00528	1.162516429
0.000715	12.53518	4.00E-06	-1.3292	0.923049	-9.825175331	2.60E-05	1.695819541
4.00E-06	2.338068	2.90E-05	1.091931	0.944295	1.679297486	0.007888	3.595750442
8.00E-06	2.270391	5.70E-05	-1.00416	0.999217	1.679362119	0.009077	3.828666794
0.001889	7.96676	5.00E-06	1.467328	0.862463	1.906589617	0.130973	10.35170087
0.007494	2.991927	0.004305	-1.13857	0.964212	2.481428769	0.023975	8.453052233
0.097464	3.339707	0.001075	1.268921	0.911444	1.329920917	0.527911	3.500254042
0.160425	2.678129	0.002411	1.223699	0.918775	1.24974478	0.588917	2.735132014
1.00E-06	2.287932	0.000995	-1.19383	0.904196	2.314553745	0.001444	6.321975172
1.00E-06	2.035382	0.00182	-1.2643	0.850175	2.269178684	0.000763	5.839368938
1.00E-06	-1.25238	0.406119	-1.14104	0.934628	-3.765382231	7.00E-06	-4.132810597
0.062353	2.765881	0.053133	-1.02119	0.998132	1.693001611	0.398922	4.781872286
0.098928	2.583425	0.07093	-1.07651	0.990124	1.597379882	0.46153	4.442461391
0.05695	2.829723	0.037778	1.05166	0.994438	1.613222407	0.427627	4.340729343
0.052757	2.868414	0.033145	1.051337	0.994316	1.563917559	0.458504	4.266913391
0.066597	2.776411	0.043066	-1.02811	0.99751	1.579971321	0.456039	4.509961858
0	1.387705	0.158424	1.299161	0.827387	2.907285678	4.00E-05	3.105430927
0	1.407295	0.158403	1.393313	0.786553	2.985757726	5.00E-05	3.015719613
1.00E-06	1.45523	0.175738	1.54404	0.74427	3.119849642	0.000148	2.94040237
5.00E-06	1.464005	0.221272	1.584691	0.754597	3.154000263	0.000433	2.91379974
3.00E-06	1.549245	0.151882	1.6838	0.726575	3.168281152	0.000411	2.915099608
1.50E-05	2.644278	9.80E-05	-1.02872	0.991498	2.0490252	0.003811	5.573827633
0.00107	-7.08424	0.002787	-1.34589	0.946841	-5.630788086	0.011504	-29.63826871
3.70E-05	-1.23699	0.406321	-1.34275	0.799877	-2.605225244	0.000213	-2.400034138
3.00E-05	-1.22702	0.440395	-1.29801	0.843672	-2.713968174	0.000178	-2.565539668
7.90E-05	-1.02836	0.931963	-1.16234	0.918229	-2.822057698	0.000109	-2.496774313
0	-1.04117	0.90806	-1.32087	0.846038	3.445610566	3.30E-05	4.371258847
2.00E-06	-1.31622	0.274354	-1.09897	0.958672	-2.90647145	7.10E-05	-3.481039798

3.00E-06	-1.37717	0.192409	-1.08615	0.962975	-2.670391197	0.000189	-3.385887864
4.00E-06	-1.32078	0.263979	-1.01862	0.995618	-2.652256072	0.000191	-3.438992006
2.00E-06	-1.65854	0.139477	-1.10351	0.970838	-4.231301438	0.000122	-6.35949501
1.00E-06	-1.8779	0.065508	-1.28098	0.902783	-4.23650115	0.00015	-6.210646555
3.00E-06	-1.74307	0.115046	-1.18695	0.941114	-4.295342164	0.000165	-6.307829561
2.00E-06	-1.75467	0.100987	-1.17007	0.945725	-4.135132387	0.000169	-6.201168939
3.00E-06	-1.74991	0.110419	-1.1605	0.952295	-4.171146383	0.000197	-6.28962338
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0	1.596817	0.01475	-1.06754	0.964212	2.371683586	7.70E-05	4.042914707
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1.70E-05	4.819137	6.60E-05	1.033385	0.994784	2.967329382	0.00496	13.83799084
0.000169	3.81122	0.000456	1.190576	0.944295	3.922194385	0.000636	12.55556179
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9.20E-05	2.736964	0.000293	1.094544	0.964212	2.395856106	0.0021	5.990962929
0.007417	-4.36744	0.003876	-1.15642	0.971372	-3.232355255	0.028355	-12.20762985
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1.60E-05	2.311938	0.001509	-1.22985	0.89343	2.181735181	0.004579	6.20342973
2.90E-05	2.333903	0.001847	-1.23122	0.897046	2.130311266	0.00761	6.12157499
3.90E-05	2.091654	0.004876	-1.32789	0.845397	2.218466902	0.004065	6.161746877
3.30E-05	2.287408	0.001928	-1.23592	0.892901	2.109729678	0.007248	5.964330949
2.50E-05	2.214479	0.002199	-1.22549	0.894301	2.105215926	0.006065	5.713158693
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2.00E-06	1.498809	0.050041	1.000426	0.99992	2.920978011	1.20E-05	4.376126175
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2.00E-06	1.190615	0.557491	1.397668	0.79703	2.970678685	0.000165	2.530596328
0.006018	4.354052	4.00E-06	1.147054	0.939287	1.645133559	0.089446	6.244693102
0.552399	4.327158	0.001398	-1.81719	0.791396	-1.783528973	0.256339	4.408825475
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0.004743	3.333762	4.00E-06	1.131956	0.932464	1.196537969	0.518195	3.523965355
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9.00E-06	-1.68532	0.02086	-1.1778	0.904142	-2.040548268	0.003066	-2.919834048
1.00E-06	1.014179	0.969195	-1.20479	0.902662	-3.09989662	8.40E-05	-2.537005566
1.00E-06	1.030036	0.93318	-1.25478	0.875749	-3.298604831	5.00E-05	-2.552165159
9.10E-05	4.364729	3.30E-05	-1.16275	0.945654	2.053136287	0.035198	10.41986586
1.00E-06	1.199874	0.541802	1.137447	0.941394	-5.153556416	1.00E-06	-4.885426691
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0.000236	3.519774	1.90E-05	1.075439	0.972947	1.824175912	0.03061	5.970291785
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3.20E-05	2.499402	0.00013	1.149503	0.920973	1.932573534	0.005764	4.202058744
3.50E-05	2.40723	0.000177	1.07383	0.965998	1.935687046	0.004996	4.339274881
5.20E-05	2.469863	0.000291	1.099908	0.958696	1.957497215	0.007763	4.395596005
1.60E-05	2.46486	0.000128	1.132957	0.932001	1.904273745	0.00604	4.142936417
6.80E-05	2.340827	0.000308	1.05037	0.980412	1.947540092	0.005318	4.340238659
8.00E-06	2.425012	7.00E-06	1.200538	0.848371	1.63809854	0.006574	3.308856392
5.00E-06	-1.40235	0.249634	-1.17079	0.931768	-3.877478296	2.70E-05	-4.644359934
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3.00E-06	3.073111	1.30E-05	1.103203	0.952663	2.404026918	0.000454	6.69671928
1.80E-05	3.018462	2.90E-05	1.111802	0.950255	2.370101469	0.000892	6.434651241
3.00E-06	3.01115	1.10E-05	1.07927	0.963568	2.309510675	0.000541	6.443504162
8.00E-06	2.952299	3.20E-05	1.132302	0.935777	2.480962549	0.00047	6.468717403
4.00E-06	3.002429	2.10E-05	1.140602	0.931768	2.423709826	0.000489	6.379976959
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0.89459	6.53934	0.000253	1.152093	0.970924	-1.301999233	0.692953	4.359489599
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8.70E-05	3.728531	1.20E-05	1.015792	0.997152	2.037076822	0.011149	7.477225454
0.000114	3.430718	1.40E-05	-1.07347	0.972648	1.918955024	0.014509	7.067056306
4.60E-05	3.696527	1.40E-05	-1.02823	0.994057	2.093571308	0.008954	7.957384593
4.90E-05	3.602528	1.30E-05	-1.02068	0.995618	2.086761279	0.007597	7.673106108
6.40E-05	3.393385	1.10E-05	-1.07964	0.967965	1.99334965	0.007974	7.302895323
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0.000176	2.672734	0.001655	-1.1988	0.928246	2.110568013	0.021121	6.762426724
0.000376	3.421344	0.000206	-1.0972	0.970838	1.91106765	0.052364	7.173952358
0	-1.46404	0.001792	1.206961	0.751898	2.897077571	0	1.639513816
0.00444	4.766997	3.00E-06	1.07546	0.975417	1.240153294	0.544483	5.497002701

4.00E-05	3.264143	1.70E-05	1.10963	0.953411	1.784254464	0.025437	5.248651692
2.30E-05	3.02282	2.70E-05	1.040899	0.987492	1.760811859	0.024647	5.113481328
1.20E-05	3.155281	6.00E-06	1.185224	0.897046	1.804534321	0.010989	4.803996953
4.00E-05	2.948052	2.80E-05	-1.00067	0.99992	1.78765568	0.018518	5.273628897
2.70E-05	2.989622	2.30E-05	1.017221	0.995876	1.797939062	0.017015	5.284161655
0.00027	2.123615	0.033906	1.407282	0.865333	2.784740814	0.006455	4.202228011
0.000126	2.195816	0.024668	1.415607	0.859944	2.844932676	0.004937	4.412912714
0.000104	2.245675	0.024492	1.549916	0.814705	3.058485624	0.003509	4.43144211
0.000109	4.416932	1.30E-05	1.038301	0.991498	2.26277694	0.010524	9.625852621
5.00E-06	-1.80089	0.017459	-1.29764	0.8501	-2.356328952	0.001311	-3.270157222
5.00E-06	-1.82219	0.015346	-1.34305	0.821716	-2.336694765	0.001442	-3.170333596
4.00E-06	-1.82536	0.01422	-1.29799	0.849164	-2.327399718	0.001389	-3.273035211
8.00E-06	-1.71525	0.02876	-1.14875	0.932298	-2.20066529	0.002732	-3.285906108
6.00E-06	-1.8517	0.013158	-1.29188	0.854976	-2.260924618	0.002148	-3.240675387
4.60E-05	-3.26548	4.30E-05	1.452053	0.786553	3.034880053	0.000176	-1.562382949
0.003051	2.119147	0.01523	-1.65389	0.74427	1.830213023	0.067416	6.41461628
0.013392	1.955152	0.035621	-1.82284	0.712856	1.7832985	0.091566	6.355552554
0.004857	2.036954	0.032747	-1.84919	0.720647	1.954361362	0.058699	7.361527719
0.005564	2.028816	0.029037	-1.80358	0.72298	1.87292989	0.069697	6.853300969
0.005643	2.063846	0.030931	-1.81241	0.72622	1.920787913	0.068414	7.184785721
0.000387	5.549655	1.20E-05	1.005891	0.999257	1.78278518	0.123931	9.835894645
0.001884	3.347846	1.60E-05	1.030411	0.991601	1.336597127	0.315338	4.342658045
0.221776	-1.89382	0.116848	-1.31645	0.907904	-2.150002453	0.072723	-3.092952274
0.005106	-2.9837	0.000102	1.036516	0.990856	-1.844493644	0.027478	-5.704385424
0.008689	-2.90713	0.000143	1.17093	0.92788	-1.7417245	0.048008	-5.928913274
0.006564	-3.17775	7.10E-05	1.000668	0.99992	-1.807200252	0.038176	-5.746674094
0.001511	-2.39814	0.001596	-1.06858	0.977792	-2.173130669	0.007051	-4.877011229
0.000845	-2.6938	0.000635	-1.20536	0.911444	-2.064489188	0.014454	-4.613842152
0.001148	-2.57392	0.001131	-1.15947	0.936575	-2.19370259	0.008793	-4.869834009
0.001103	-2.42032	0.001501	-1.06476	0.979352	-2.136577874	0.008561	-4.856691401
0.001279	-2.66255	0.000918	-1.18275	0.929858	-2.156141621	0.011427	-4.85380225
0.384253	-4.19414	1.00E-06	1.001545	0.99992	1.588772627	0.064924	-2.643940881
0.389393	-6.97823	0.004861	1.821356	0.878012	1.158730464	0.889651	-10.96877073
0.388677	-6.59725	4.10E-05	1.666983	0.817143	1.687404114	0.276574	-6.517406787
0.440229	-6.67418	5.40E-05	1.946289	0.759631	1.820657819	0.216718	-7.134719202
0.536135	-7.17273	3.60E-05	1.529433	0.862463	1.726110308	0.271261	-6.355450687
0.474295	-7.04842	4.00E-05	1.70221	0.811702	1.787612384	0.235992	-6.711684195
0.446549	-6.88489	4.90E-05	1.755292	0.79868	1.755590779	0.256079	-6.883718866
6.80E-05	2.108689	0.000563	1.211425	0.86852	2.023547726	0.001659	3.522326595
4.70E-05	2.223479	0.000875	1.177727	0.905846	2.28497304	0.001056	4.31389335
7.50E-05	2.132279	0.001504	1.198771	0.897046	2.323388882	0.00088	4.132659198
2.00E-06	1.04122	0.9193	-1.00485	0.999263	5.447027823	3.00E-06	5.699034715
2.00E-06	1.034788	0.93136	1.044132	0.98986	5.648648253	2.00E-06	5.598097653
1.00E-06	1.002974	0.994241	-1.03118	0.993552	5.910679075	1.00E-06	6.113129113
1.00E-06	1.002315	0.995469	-1.03491	0.991498	5.851477739	1.00E-06	6.069776678
0.772138	-1.37142	0.755479	1.604883	0.929865	-1.709087989	0.614903	-3.76165436
0.000236	4.824924	9.20E-05	1.214786	0.937021	2.530148667	0.019221	10.04932416

0.003784	1.468908	0.246641	1.368654	0.859417	1.544407266	0.216575	1.657535082
0.005629	1.430197	0.297301	1.325216	0.87739	1.620422412	0.171595	1.748789111
0.072499	-4.1777	9.00E-06	1.490937	0.786553	2.008674802	0.01898	-3.100890075
0.05364	-4.09703	8.00E-06	1.478494	0.786553	1.997805216	0.017738	-3.032045114
0.059997	-4.27375	6.00E-06	1.471731	0.786553	2.046404524	0.014275	-3.073590361
0.047711	-4.07855	9.00E-06	1.524261	0.764364	2.020030289	0.015978	-3.077565515
0.022145	-3.90378	1.20E-05	1.656527	0.721031	2.071136735	0.01223	-3.122301942
0.791424	-3.50731	1.90E-05	1.354285	0.8291	1.293505739	0.414493	-3.672115001
1.00E-06	-1.59899	0.060402	1.78728	0.610726	3.677334496	1.10E-05	1.286748861
2.00E-06	1.537712	0.038761	-1.01923	0.994784	3.156142603	5.00E-06	4.946579659
0	1.658536	0.016572	1.113839	0.93841	3.360414971	3.00E-06	5.003748274
1.00E-06	1.705598	0.014889	1.178846	0.901295	3.279223294	7.00E-06	4.744499801
2.00E-06	1.504942	0.073763	1.031802	0.990669	3.449252408	6.00E-06	5.030930522
2.90E-05	-4.55816	0.013617	-1.86078	0.858982	-7.093619882	0.002818	-17.37651887
3.40E-05	-8.3345	0.001555	-1.65714	0.897691	-5.530360725	0.013778	-27.81470437
0.039472	3.813416	0.000833	-1.39234	0.883783	1.104289855	0.86666	5.863310447
0.03112	3.862995	0.000757	-1.44099	0.866867	1.106579651	0.864152	6.159802255
0.045611	3.408007	0.001777	-1.56	0.828756	1.099185496	0.87219	5.84381801
0.031551	3.730863	0.001081	-1.51172	0.8501	1.123983588	0.842326	6.33928567
0.03153	3.740857	0.000857	-1.53556	0.839665	1.089626957	0.885136	6.259142381
4.00E-06	7.508165	9.10E-05	1.550281	0.869033	3.437642066	0.014979	16.64884383
4.00E-06	7.837112	9.40E-05	1.632699	0.859417	3.524026224	0.015323	16.91566898
3.00E-06	7.662107	9.90E-05	1.590164	0.866265	3.770537781	0.010181	18.16810515
6.00E-06	7.904369	9.80E-05	1.679023	0.850432	3.273733743	0.023472	15.41181806
6.00E-06	7.859076	8.60E-05	1.678574	0.849467	3.290660327	0.021093	15.40685557
1.40E-05	5.991377	0.000112	1.049152	0.993279	3.56591089	0.005757	20.3637888
1.00E-06	2.888068	0.060531	1.06564	0.992928	7.185625449	0.001136	19.47427435
1.00E-06	-2.14058	0.001838	-1.13432	0.935777	-2.602971109	0.000314	-4.912053475
2.00E-06	-2.32266	0.001155	-1.26261	0.868044	-2.445800138	0.00108	-4.4992153
2.00E-06	-2.30016	0.000834	-1.24475	0.871753	-2.468675128	0.000621	-4.56182622
3.00E-06	-2.07543	0.002505	-1.08466	0.964212	-2.417561044	0.000672	-4.625864535
4.00E-06	-2.10338	0.002645	-1.10603	0.955418	-2.486352896	0.000627	-4.728411049
0.135102	9.852584	1.00E-06	-1.02444	0.996324	1.029391458	0.963092	10.3900162
0.072991	9.35961	2.00E-06	-1.00219	0.99992	1.048253478	0.94067	9.832681392
0.104104	8.914324	1.00E-06	1.016731	0.998132	1.050318395	0.934785	9.208806169
0.062408	19.8689	4.00E-06	1.056052	0.994551	1.417552471	0.632141	26.67028281
3.20E-05	-1.3765	0.501431	-1.22938	0.941924	-4.565992418	0.000845	-5.112398546
3.10E-05	-1.86827	0.03863	-1.19581	0.928172	-2.815712036	0.001423	-4.399099566
6.20E-05	-1.74954	0.061415	-1.10073	0.965998	-2.821357638	0.001206	-4.484374674
5.50E-05	-1.81322	0.051555	-1.16189	0.941811	-2.852590969	0.001372	-4.451676215
4.50E-05	-1.85112	0.03835	-1.17909	0.932521	-2.761365177	0.001458	-4.335238755
6.10E-05	-1.83783	0.047063	-1.16855	0.93841	-2.790498012	0.001734	-4.388762405
0.850136	3.591586	2.00E-05	1.004645	0.999257	-1.202540245	0.594565	2.972856038
0.131498	-2.68322	0.043883	-1.71178	0.842664	-1.722660786	0.33954	-2.70027671
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0.087176	-2.82101	0.038366	-1.64447	0.859417	-1.810537159	0.30287	-3.105895067
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0.008427	14.27657	5.00E-06	1.207458	0.959776	-1.217091952	0.786751	9.714678476
0.005038	15.02276	0.000301	1.212944	0.973901	2.061424968	0.396335	25.53150645
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0.005737	15.26647	0.000297	1.301752	0.960424	2.009913841	0.419267	23.57153923
0.004586	16.02274	0.000283	1.262136	0.966418	2.152029485	0.373626	27.3198768
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6.00E-06	3.036314	3.50E-05	-1.01562	0.996515	2.32280755	0.001362	7.162901564
0.003232	5.581256	3.00E-06	1.145619	0.951168	1.499766535	0.251708	7.306604388
3.70E-05	2.004939	0.045133	-1.02812	0.995618	4.235983617	0.000188	8.731718215
0	1.015575	0.949087	-1.1162	0.916799	-3.937819575	0	-3.473768563
0.201784	-3.9345	2.00E-06	-1.06192	0.975923	1.701490445	0.032177	-2.177547999
0.00087	6.887573	0.000162	-1.04298	0.994784	2.784582411	0.045671	20.00341961
1.00E-06	1.205458	0.487697	-1.06778	0.973153	3.852507897	4.00E-06	4.958807072
1.00E-06	1.253036	0.407489	-1.04936	0.983979	3.832206216	7.00E-06	5.038920753
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3.00E-06	4.624869	9.40E-05	1.126313	0.965998	4.214613892	0.000364	17.3060524
3.40E-05	-1.26561	0.333508	-1.15128	0.919239	-2.804787848	5.90E-05	-3.083315211
2.30E-05	-1.21024	0.423215	-1.02786	0.991257	-2.902236175	2.20E-05	-3.41721562
1.60E-05	-1.27353	0.312531	-1.11219	0.943919	-2.867975718	4.00E-05	-3.284035142
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1.00E-05	-1.24043	0.345285	-1.0788	0.961043	-2.923873988	1.60E-05	-3.361924015
0.619978	-4.68548	1.00E-05	-1.23229	0.909151	1.195404252	0.66661	-3.180721295
6.20E-05	2.695246	0.00033	1.093046	0.965003	1.70390642	0.058142	4.201514371
0.00013	2.907256	0.000672	-1.04855	0.989312	1.771829198	0.078649	5.401251026
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0.00045	2.509399	0.002325	-1.0449	0.98986	1.739243385	0.083166	4.5604394
9.80E-05	2.641227	0.000478	1.012799	0.998057	1.695316467	0.064535	4.421132201
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1.00E-06	-2.65354	2.60E-05	1.008546	0.998132	-1.875569502	0.004806	-5.019430068
1.00E-06	-3.27186	2.40E-05	1.051845	0.98308	-1.97890691	0.010643	-6.810391415
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0.001833	3.203283	0.000246	1.159359	0.942771	2.025771632	0.027011	5.597159887
0.001846	3.094509	0.000274	1.026356	0.994784	2.044385201	0.022193	6.163913951
0.948724	-22.7312	0.000412	1.308224	0.967127	1.395306598	0.786691	-21.31254152
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0.009073	5.403966	1.00E-06	1.039986	0.98986	1.210516855	0.56784	6.290076524
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0.00058	-2.3114	0.003965	-1.04858	0.987616	-2.215939097	0.009149	-4.884645112
0.000319	-2.25674	0.003748	-1.04973	0.986677	-2.26330428	0.005714	-4.865696968
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0.000607	-2.35364	0.003217	-1.02192	0.995876	-2.256387495	0.007567	-5.196789501
4.60E-05	-3.57104	0.000708	-1.43927	0.859417	-2.167165289	0.045305	-5.377042514
7.40E-05	-3.57548	0.000935	-1.47537	0.852936	-2.215848566	0.045384	-5.369992504
6.60E-05	-3.61275	0.000621	-1.53518	0.824455	-2.154961831	0.046175	-5.071287021
9.60E-05	-3.42318	0.001167	-1.40247	0.868979	-2.201576175	0.044439	-5.373634966
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0.129728	4.15361	0.000492	-1.11359	0.973211	1.584950997	0.311304	7.331093769
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0.088357	5.122332	0.000813	-1.1963	0.959742	1.77353683	0.291722	10.86796868
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0.500194	4.04045	0.000131	-1.07817	0.980146	1.470277951	0.33415	6.404969076
0.40413	4.205035	0.000187	-1.08355	0.980085	1.504863535	0.334374	6.856727566
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1.00E-06	-1.04321	0.898573	-1.37393	0.797731	2.442657405	0.000807	3.217032186
1.00E-06	-1.08014	0.800033	-1.44305	0.762036	2.537903013	0.000402	3.390592517
1.00E-06	-1.04885	0.879362	-1.4547	0.748114	2.398607511	0.000701	3.326761753
0.006547	-3.21895	0.000198	1.348726	0.85916	-1.483607443	0.24076	-6.44104607
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0.002078	-3.20322	3.50E-05	1.308275	0.850151	-1.439634018	0.201763	-6.033070738
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0	1.121295	0.69154	-1.03789	0.98929	-4.217209814	2.00E-06	-3.623706194
0	1.08999	0.744338	-1.0464	0.981891	-3.912668379	1.00E-06	-3.430450426
7.20E-05	2.161875	0.05176	-1.85228	0.751898	2.997255713	0.008562	12.00221188
0.001602	7.506029	6.60E-05	-1.3901	0.90573	2.834386185	0.035019	29.57429065
0.001815	7.892922	6.40E-05	-1.26156	0.9436	2.747943954	0.046157	27.36229493
0.001148	7.950447	7.00E-05	-1.31648	0.931768	2.899599196	0.037466	30.34888947
2.00E-05	-1.55516	0.034006	-1.03586	0.987275	-2.19472397	0.000551	-3.294989885
1.50E-05	-1.49464	0.041745	-1.01664	0.994784	-2.202412783	0.000292	-3.237929775
0.002052	7.091687	4.20E-05	1.154629	0.965281	2.523103289	0.046473	15.49679953
0.002135	6.489584	6.00E-05	1.010176	0.999217	2.26508319	0.075424	14.55137287
0.003506	5.789447	4.80E-05	1.021137	0.997729	2.11318678	0.078038	11.9809433
0.18775	4.614032	0.000434	-1.06565	0.98986	-1.031082457	0.96538	4.76870337
0.066122	1.304718	0.72665	-4.15689	0.621613	-3.824784786	0.041039	1.418005506
1.00E-06	-1.38496	0.293551	-1.24037	0.902662	-3.795618878	5.60E-05	-4.238050236
1.00E-06	-1.421	0.247034	-1.32953	0.860146	-3.802826872	5.10E-05	-4.06447975
1.00E-06	-1.50379	0.173738	-1.42368	0.813124	-3.936298698	4.10E-05	-4.157791819
1.00E-06	-1.40866	0.256458	-1.28267	0.878012	-3.851204843	4.10E-05	-4.229501375

0	-1.4969	0.170198	-1.35456	0.848303	-3.78050375	4.70E-05	-4.177768843
0.000654	-4.38244	0.008871	-1.24082	0.959742	-4.138108864	0.017132	-14.61537434
0	-1.63877	0.130787	-1.31518	0.882572	-4.43637231	4.90E-05	-5.527898461
0	-1.56881	0.170489	-1.27311	0.898907	-4.722330303	2.70E-05	-5.819137374
0	-1.68834	0.109314	-1.39235	0.854976	-4.501336684	4.70E-05	-5.458242042
0	-1.6458	0.126555	-1.35681	0.865333	-4.459014635	4.60E-05	-5.408773027
0	-1.65351	0.123229	-1.40384	0.848582	-4.549084056	4.00E-05	-5.358117403
0	1.340288	0.075589	-1.22669	0.804349	-3.175273774	0	-1.931296197
0.77947	-3.43842	0.008509	1.139777	0.972709	-1.359554847	0.616128	-5.328137049
8.00E-06	6.328561	1.20E-05	-1.1107	0.972648	2.785357896	0.009422	19.57866431
1.00E-06	2.071648	0.002156	1.199855	0.897046	2.864205901	7.60E-05	4.945286529
9.00E-05	4.976337	2.10E-05	-1.21531	0.931553	2.260420832	0.022488	13.6705881
0.002297	-8.15278	5.20E-05	-1.11062	0.980118	-2.181571442	0.133915	-16.01440131
0.002078	-7.41764	6.70E-05	1.001341	0.99992	-2.230682802	0.110856	-16.56858155
0.002025	-6.50448	9.50E-05	1.038863	0.994784	-2.405281286	0.066331	-16.25311488
5.00E-06	1.563311	0.043704	-1.12173	0.936876	2.685650609	8.20E-05	4.709608992
3.00E-06	1.581582	0.032096	-1.14592	0.917087	2.738720753	4.30E-05	4.963578096
4.00E-06	1.690993	0.017717	-1.00802	0.998298	2.681056817	8.80E-05	4.570014225
4.00E-06	1.621626	0.025287	-1.07203	0.965998	2.661790417	7.00E-05	4.627340404
9.00E-06	1.602602	0.03865	-1.06438	0.973211	2.675107359	0.000123	4.563118777
0.003333	5.309083	2.00E-06	1.057846	0.983543	1.309024284	0.432629	6.569689065
0.007835	5.537385	5.00E-06	1.122135	0.961431	1.287319493	0.530538	6.352519507
0.004702	5.313249	1.00E-06	1.051287	0.986348	1.283964636	0.471417	6.489210874
0.004874	5.068391	2.00E-06	1.009341	0.998532	1.292208241	0.455779	6.488804136
0.005751	5.163087	2.00E-06	1.063748	0.980029	1.287156296	0.458286	6.247438573
1.00E-06	-1.95005	0.022885	-1.08962	0.970924	-4.027426103	4.00E-05	-7.207739475
0.000128	-4.40402	4.60E-05	-1.0264	0.995817	-1.746208599	0.124206	-7.492574754
0.000397	6.808459	1.10E-05	-1.04659	0.9917	2.529361588	0.022421	18.02332495
0.000456	6.935881	1.20E-05	-1.05991	0.98986	2.420635701	0.032698	17.7950302
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0.00629	-1.89317	0.178392	-1.22135	0.950961	-4.037260927	0.004101	-6.258000096
2.40E-05	-2.49281	0.006442	-1.30708	0.893228	-3.444497698	0.000677	-6.569210736
0.000158	-1.90217	0.132701	-1.17415	0.959742	-4.165778825	0.001474	-6.748732835
0.656153	2.336186	0.076116	-1.68161	0.842872	-1.240593194	0.747108	3.166677237
0	-2.09218	0.000118	1.158576	0.892502	3.604483329	0	1.487031063
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0.517005	4.308113	0.109661	1.742548	0.920882	1.312170319	0.848897	3.244087322
0.497466	3.551082	0.195459	1.734055	0.920528	1.613971048	0.728434	3.305167361
2.00E-06	-2.63844	0.004571	-1.59981	0.786553	-3.511802354	0.000687	-5.791748369
2.00E-06	-2.74492	0.00508	-1.63735	0.786553	-3.572509638	0.001023	-5.989095213
1.00E-06	-2.78803	0.003451	-1.69118	0.770487	-3.552793548	0.000783	-5.857007475
0.095808	4.707698	0.001543	-1.0851	0.987275	1.193534846	0.801313	6.096958649
1.30E-05	1.183392	0.601503	-1.26361	0.883799	-3.08596716	0.000235	-2.063716028
0.000262	-2.6121	0.0033	1.02359	0.995876	-2.277356108	0.016066	-6.089013513
2.70E-05	-1.20441	0.513433	1.051658	0.982669	-2.743850833	0.000275	-3.475450748
1.30E-05	-1.31329	0.316266	-1.02748	0.993495	-2.758124477	0.00028	-3.525362619
0.837724	1.263893	0.809666	-2.92492	0.786553	2.069446638	0.427749	7.650314599

0.906704	2.561489	0.435051	2.416753	0.892901	-1.314251913	0.877158	-1.239990621
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0.030918	-6.30706	0.024098	-4.21042	0.726575	-2.892776132	0.251415	-4.333275617
0.022499	-5.86929	0.01653	-3.38419	0.741217	-2.698160727	0.233348	-4.679497565
0.023858	-5.9536	0.012975	-3.11406	0.747406	-2.548603315	0.250506	-4.872532972
0.015555	-5.89708	0.005216	-2.7044	0.750934	-2.321180696	0.237948	-5.061447856
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1.00E-06	-2.41806	0.000187	1.124601	0.935777	-1.77830017	0.014872	-4.835825163
0.393022	1.097481	0.905528	-3.15197	0.702573	1.093192598	0.923218	3.781600465
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2.20E-05	2.35757	0.000279	1.205861	0.889526	1.917476566	0.006377	3.74884504
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2.00E-06	1.372444	0.213172	1.183735	0.906718	3.262303139	3.10E-05	3.782372309
4.00E-06	1.324258	0.286274	1.090049	0.963056	3.197496267	4.20E-05	3.884515021
1.00E-06	1.513154	0.089717	1.28507	0.851561	3.124570561	4.40E-05	3.679142151
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0.015315	2.649487	0.029563	-1.32978	0.917087	2.316584669	0.079707	8.161867696
0.012152	3.435256	0.007034	-1.03374	0.995876	1.414316543	0.550057	5.022464015
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0.273739	1.395111	0.513022	-1.014	0.998821	-1.004524838	0.995576	1.408270806
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0.011131	-4.16047	0.000554	1.155419	0.960892	-1.749690397	0.208704	-8.410920586
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5.00E-06	-1.13409	0.733525	-1.09743	0.968352	-3.786960859	9.00E-06	-3.913454534
0.003977	6.151785	4.50E-05	-1.53031	0.851561	-3.524762801	0.003715	2.670863214
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0.373157	-1.02969	0.973824	-1.03997	0.996515	1.527804374	0.596265	1.543060667
1.00E-06	-2.0301	0.193087	-1.58936	0.87558	-13.27108045	2.30E-05	-16.95115226
0.86016	5.246242	5.00E-06	-1.19002	0.932464	-1.368875874	0.398093	4.560780388
0.188865	2.392542	0.429496	2.678229	0.860515	1.654457532	0.714289	1.477975994
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0.00579	-2.79702	0.003812	1.012597	0.998307	-1.502340852	0.319344	-4.25501713
0.0496	13.24956	2.90E-05	-1.09645	0.987616	1.618324856	0.485391	23.51023643
0.448997	-4.30318	5.00E-06	1.226708	0.901295	1.735400199	0.057126	-3.041800646
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0.459804	4.024768	0.021398	2.241599	0.790735	1.220795507	0.824169	2.191926298
0.544327	-6.33414	7.60E-05	2.086163	0.734547	2.575322941	0.013508	-5.131025834
0.676685	-8.30953	6.10E-05	1.69386	0.858117	2.385073114	0.060776	-5.901362788
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0.055578	2.199636	0.022405	1.470483	0.839215	1.328928803	0.508422	1.98789095
1.00E-06	4.200246	7.20E-05	1.00706	0.999217	4.184660083	0.000141	17.45338414
2.00E-06	3.914043	7.90E-05	-1.0225	0.996116	3.756102766	0.000215	15.03232981
3.00E-06	4.355139	5.30E-05	1.077754	0.980029	3.608253828	0.000479	14.58073659
0.872972	3.231567	0.325428	-2.99646	0.859417	-1.481478805	0.808615	6.536210319
0.856854	3.123183	0.34008	-3.24197	0.848096	-1.484546012	0.806695	6.820454978
0.914735	3.388298	0.323039	-2.97578	0.865333	-1.447763028	0.827164	6.964425301
0.97215	2.795206	0.393307	-3.00744	0.85916	-1.218916813	0.908334	6.896631495
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0	1.1485	0.52107	1.158661	0.897046	-4.364196911	0	-4.40280586
0	1.166379	0.481009	1.154696	0.902662	-4.398312967	0	-4.354256829
0	1.144968	0.569376	1.162642	0.902662	-4.777469624	0	-4.8512153
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0	1.121804	0.656897	1.127773	0.932521	-4.660301247	0	-4.685100516
0.000689	-5.59525	0.000932	1.17498	0.966291	-1.808128975	0.309424	-11.88718719
0.448134	3.638966	0.000597	-1.73751	0.7656	1.154918619	0.784454	7.302231985
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8.00E-05	-3.1322	0.000162	1.028	0.994762	-1.953419095	0.026532	-6.289818996
0.234053	1.661046	0.497916	2.386831	0.794055	1.063156382	0.95533	-1.351583461
0.247691	3.376492	0.082755	2.047403	0.85359	1.378067888	0.74267	2.272652526
0.204622	3.014137	0.067002	2.043669	0.821017	1.301192684	0.755865	1.91908432
0.256828	3.199303	0.066773	2.035902	0.833683	1.316857373	0.757768	2.069365923
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0.275487	2.860366	0.075741	1.900723	0.843624	1.195895436	0.837972	1.799682495
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2.70E-05	-1.46312	0.199274	1.060934	0.981891	-1.845701642	0.04197	-2.865029643
2.60E-05	-1.42006	0.220106	1.073954	0.975126	-1.836165528	0.035113	-2.800288926
3.90E-05	-1.49395	0.177376	1.016764	0.997177	-1.830527661	0.047185	-2.780567086
2.70E-05	-1.47137	0.195968	1.033998	0.992196	-1.879049562	0.037549	-2.858771037
0.735796	1.424791	0.548398	-1.84353	0.821716	2.39094473	0.117508	6.280153036
0.816945	1.493763	0.491099	-1.691	0.858117	2.256090844	0.15047	5.698771491
0.765943	3.916857	0.268343	-1.21804	0.987275	1.203493053	0.931474	5.741728662
0.000292	-3.85225	2.20E-05	-1.0867	0.970924	-1.953423671	0.026666	-6.924725739
0.000224	-3.77296	2.80E-05	1.0049	0.999257	-1.896410044	0.035091	-7.190146784
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0.05538	10.74654	3.00E-05	1.003714	0.99992	1.522204542	0.514924	16.29789218
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*CH_34vsCG_34_a**dj.P.Val*

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For Review Only

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For Review Only

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For Review Only

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9.40E-05
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Probe ID	Gene Symbol
A_69_P016876	<i>ABCG1</i>
A_69_P012101	<i>ABI1</i>
A_69_P034926	<i>ABR</i>
A_69_P116796	<i>ACADSB</i>
A_69_P031526	<i>ACTJ1</i>
A_69_P102927	<i>ACTR2</i>
A_69_P083076	<i>AGPAT9</i>
A_69_P125931	<i>AIF1</i>
A_69_P023771	<i>AKT1</i>
A_69_P018694	<i>ALDOA</i>
A_69_P029126	<i>ANKH</i>
A_69_P046916	<i>AP2S1</i>
A_69_P115406	<i>APBB1IP</i>
A_69_P074026	<i>APOBEC4</i>
A_69_P068866	<i>ARHGEF12</i>
A_69_P017221	<i>ARPC1B</i>
A_69_P050246	<i>ARPC2</i>
A_69_P074021	<i>ARPC5</i>
A_69_P015176	<i>ARRDC1</i>
A_69_P036766	<i>ATXN1</i>
A_69_P053136	<i>BIN2</i>
A_69_P091727	<i>BRWD3</i>
A_69_P024201	<i>BTBD3</i>
A_69_P122031	<i>C20H6orf47</i>
A_69_P068511	<i>CADM1</i>
A_69_P087206	<i>CAPZB</i>
A_69_P003371	<i>CAV2</i>
A_69_P081821	<i>CDH1</i>
A_69_P011421	<i>CDK2AP2</i>
A_69_P045306	<i>CEBPG</i>
A_69_P068582	<i>CEP164</i>
A_69_P086946	<i>CNR2</i>
A_69_P042016	<i>COBLL1</i>
A_69_P033641	<i>COPZ2</i>
A_69_P082361	<i>COTL1</i>
A_69_P054566	<i>CPM</i>
A_69_P034996	<i>CRK</i>
A_69_P096906	<i>CRTC3</i>
A_69_P021346	<i>CSNK1E</i>
A_69_P031686	<i>CYTH1</i>
A_69_P112155	<i>DACT3</i>
A_69_P095736	<i>DDIT4</i>
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A_69_P008122	<i>DESI2</i>
A_69_P003856	<i>DET1</i>
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A_69_P026836	<i>DOCK8</i>
A_69_P041976	<i>DPP4</i>
A_69_P018026	<i>DTX2</i>
A_69_P089121	<i>EDNRA</i>
A_69_P050776	<i>EFHD1</i>
A_69_P095658	<i>EIF4EBP2</i>

A_69_P008976	<i>ELF5</i>
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A_69_P115246	<i>EQMCE1</i>
A_69_P006771	<i>EQMHCB2</i>
A_69_P089741	<i>ETNPPL</i>
A_69_P001986	<i>ETS2</i>
A_69_P118286	<i>FAM104A</i>
A_69_P055497	<i>FAM208A</i>
A_69_P073756	<i>FAM20B</i>
A_69_P030331	<i>FBXO45</i>
A_69_P074301	<i>G0S2</i>
A_69_P075876	<i>GABPB2</i>
A_69_P088677	<i>GALNT7</i>
A_69_P053996	<i>GDF11</i>
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Probe ID	Gene Symbol
A_69_P081361	<i>GPR56</i>
A_69_P081031	<i>GPT2</i>
A_69_P042606	<i>GULP1</i>
A_69_P089406	<i>HSPA4L</i>
A_69_P116892	<i>IGF1R</i>
A_69_P096901	<i>IQGAP1</i>
A_69_P074281	<i>IRF6</i>
A_69_P028651	<i>ITGA2</i>
A_69_P064926	<i>KCTD10</i>
A_69_P027012	<i>KDM4C</i>
A_69_P040691	<i>KLF5</i>
A_69_P082366	<i>KLHL36</i>
A_69_P074306	<i>LAMB3</i>
A_69_P125771	<i>LIMA1</i>
A_69_P006001	<i>LOC100051657</i>
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A_69_P087021	<i>LUZP1</i>
A_69_P021976	<i>MAPK12</i>
A_69_P010783	<i>MARK2</i>
A_69_P066707	<i>MBD1</i>
A_69_P057721	<i>MBNL1</i>
A_69_P054561	<i>MDM2</i>
A_69_P070854	<i>ME3</i>
A_69_P117921	<i>MHCB1</i>
A_69_P037996	<i>MHCB3</i>
A_69_P038031	<i>MHCC1</i>
A_69_P021511	<i>MKL1</i>
A_69_P083456	<i>MOB1B</i>
A_69_P122211	<i>MPEG1</i>
A_69_P073424	<i>MPZL1</i>
A_69_P003971	<i>MYH6</i>
A_69_P024986	<i>MYH7</i>
A_69_P021136	<i>MYH9</i>
A_69_P054076	<i>MYL6</i>

A_69_P098246	<i>MYO1E</i>
A_69_P098281	<i>MYZAP</i>
A_69_P081081	<i>N4BP1</i>
A_69_P014931	<i>NACC2</i>
A_69_P061846	<i>NDST1</i>
A_69_P095859	<i>NDST2</i>
A_69_P094292	<i>NHLRC2</i>
A_69_P027586	<i>NINJ1</i>
A_69_P104824	<i>NPAT</i>
A_69_P050741	<i>NPPC</i>
A_69_P036455	<i>NQO2</i>
A_69_P033366	<i>NR1D1</i>
A_69_P076377	<i>NRAS</i>
A_69_P026686	<i>OSTF1</i>
A_69_P105881	<i>PAPD7</i>
A_69_P050051	<i>PERP</i>
A_69_P057631	<i>PFN2</i>
A_69_P073166	<i>PIK3C2B</i>
A_69_P057376	<i>PIK3CB</i>
A_69_P042446	<i>PLEKHA3</i>
A_69_P003706	<i>PNLIP</i>
A_69_P108988	<i>PNRC2</i>
A_69_P113215	<i>POC1B</i>
A_69_P117377	<i>PPP1R12A</i>
A_69_P045861	<i>PPP1R14A</i>
A_69_P059606	<i>PPP1R21</i>
A_69_P031466	<i>PPP1R27</i>
A_69_P029622	<i>PRKCI</i>
A_69_P059902	<i>PRKD3</i>
A_69_P086401	<i>PTP4A2</i>
A_69_P065791	<i>PUS1</i>
A_69_P114506	<i>RALBP1</i>
A_69_P054546	<i>RAP1B</i>
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A_69_P057456	<i>RASA2</i>
Probe ID	Gene Symbol
A_69_P096936	<i>RCCD1</i>
A_69_P023651	<i>RCOR1</i>
A_69_P011106	<i>RELA</i>
A_69_P119201	<i>RIOK3</i>
A_69_P044221	<i>RNF19A</i>
A_69_P024346	<i>RNF24</i>
A_69_P035441	<i>RPAIN</i>
A_69_P014825	<i>RXRA</i>
A_69_P089771	<i>SGMS2</i>
A_69_P015792	<i>SLC7A2</i>
A_69_P004671	<i>SMAD3</i>
A_69_P062921	<i>SNX2</i>
A_69_P079016	<i>SP4</i>
A_69_P077891	<i>SRPK2</i>
A_69_P079837	<i>SSMEM1</i>
A_69_P014321	<i>ST6GALNAC4</i>

A_69_P026071	<i>TAF4</i>
A_69_P058741	<i>TCF7L1</i>
A_69_P001416	<i>TES</i>
A_69_P047986	<i>TMC4</i>
A_69_P023031	<i>TMED8</i>
A_69_P021341	<i>TMEM184B</i>
A_69_P043772	<i>TMEM68</i>
A_69_P087396	<i>TMEM82</i>
A_69_P016336	<i>TMPRSS15</i>
A_69_P020576	<i>TMTC3</i>
A_69_P109746	<i>TNFRSF21</i>
A_69_P002191	<i>TPM4</i>
A_69_P068906	<i>UBASH3B</i>
A_69_P096931	<i>UNC45A</i>
A_69_P046759	<i>VASP</i>
A_69_P069606	<i>VPS26B</i>
A_69_P084433	<i>WDR1</i>
A_69_P027581	<i>WNK2</i>
A_69_P067836	<i>XAB2</i>
A_69_P092742	<i>XIAP</i>
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A_69_P025671	<i>ZMYND8</i>
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Gene Name
ATP-binding cassette sub-family G member 1
abl-interactor 1
active BCR-related
acyl-CoA dehydrogenase, short/branched chain
actin related protein 1 homolog
ARP2 actin-related protein 2 homolog (yeast)
1-acylglycerol-3-phosphate O-acyltransferase 9
allograft inflammatory factor 1
v-akt murine thymoma viral oncogene homolog 1
aldolase A, fructose-bisphosphate
ANKH inorganic pyrophosphate transport regulator
adaptor-related protein complex 2, sigma 1 subunit
amyloid beta (A4) precursor protein-binding, family B, member 1 interacting protein
apolipoprotein B mRNA editing enzyme, catalytic polypeptide-like 4 (putative)
Rho guanine nucleotide exchange factor (GEF) 12
actin related protein 2/3 complex, subunit 1B, 41kDa
actin related protein 2/3 complex, subunit 2, 34kDa
actin related protein 2/3 complex, subunit 5, 16kDa
arrestin domain containing 1
ataxin 1
bridging integrator 2
bromodomain and WD repeat domain containing 3
BTB (POZ) domain containing 3
chromosome 20 open reading frame, human C6orf47
cell adhesion molecule 1
capping protein (actin filament) muscle Z-line, beta
caveolin 2
cadherin 1, type 1, E-cadherin (epithelial)
cyclin-dependent kinase 2 associated protein 2
CCAAT/enhancer binding protein (C/EBP), gamma
centrosomal protein 164kDa
cannabinoid receptor 2 (macrophage)
cordons-bleu WH2 repeat protein-like 1
coatamer protein complex, subunit zeta 2
coactosin-like 1 (Dictyostelium)
carboxypeptidase M
v-crk avian sarcoma virus CT10 oncogene homolog
CREB regulated transcription coactivator 3
casein kinase 1, epsilon
cytohesin 1
dishevelled binding antagonist of beta catenin 3
DNA-damage-inducible transcript 4
DEAD (Asp-Glu-Ala-Asp) box polypeptide 4
desumoylating isopeptidase 2
de-etiolated homolog 1 (Arabidopsis)
dedicator of cytokinesis 1
dedicator of cytokinesis 8
dipeptidyl-peptidase 4
deltex homolog 2 (Drosophila)
endothelin receptor type A
EF-hand domain family, member D1
eukaryotic translation initiation factor 4E-binding protein 2

E74-like factor 5 (ets domain transcription factor)
elastin
MHC class I antigen 3.7
MHC class I heavy chain
ethanolamine-phosphate phospho-lyase
v-ets avian erythroblastosis virus E26 oncogene homolog 2
family with sequence similarity 104, member A
family with sequence similarity 208, member A
family with sequence similarity 20, member B
F-box protein 45
G0/G1switch 2
GA binding protein transcription factor, beta subunit 2
UDP-N-acetyl-alpha-D-galactosamine:polypeptide N-acetylgalactosaminyltransferase 7
growth differentiation factor 11
gap junction protein, beta 4, 30.3kDa
guanine nucleotide binding protein (G protein), alpha inhibiting activity polypeptide 1
G protein-coupled receptor 174
Gene Name
G protein-coupled receptor 56
glutamic pyruvate transaminase (alanine aminotransferase) 2
engulfment adaptor PTB domain containing 1
heat shock 70kDa protein 4-like
insulin-like growth factor 1 receptor
IQ motif containing GTPase activating protein 1
interferon regulatory factor 6
integrin, alpha 2 (CD49B, alpha 2 subunit of VLA-2 receptor)
potassium channel tetramerization domain containing 10
lysine (K)-specific demethylase 4C
Kruppel-like factor 5 (intestinal)
kelch-like family member 36
laminin, beta 3
LIM domain and actin binding 1
7-51 putative nonclassical MHC class I antigen
patr class I histocompatibility antigen, A-2 alpha chain-like
leucine zipper protein 1
mitogen-activated protein kinase 12
MAP/microtubule affinity-regulating kinase 2
methyl-CpG binding domain protein 1
muscleblind-like splicing regulator 1
MDM2 oncogene, E3 ubiquitin protein ligase
malic enzyme 3, NADP(+)-dependent, mitochondrial
MHC Class I heavy chain
MHC Class I heavy chain
MHC Class I heavy chain
megakaryoblastic leukemia (translocation) 1
MOB kinase activator 1B
macrophage-expressed gene 1 protein-like
myelin protein zero-like 1
myosin, heavy Chain 6, cardiac muscle, alpha
myosin, heavy Chain 6, cardiac muscle, beta
myosin, heavy chain 9, non-muscle
myosin, light chain 6, alkali, smooth muscle and non-muscle

myosin IE
myocardial zonula adherens protein
NEDD4 binding protein 1
NACC family member 2, BEN and BTB (POZ) domain containing
N-deacetylase/N-sulfotransferase (heparan glucosaminyl) 1
N-deacetylase/N-sulfotransferase (heparan glucosaminyl) 2
NHL repeat containing 2
uncharacterized LOC100146796
nuclear protein, ataxia-telangiectasia locus
snake venom metalloprotease inhibitor 02D01-like
NAD(P)H dehydrogenase, quinone 2
nuclear receptor subfamily 1, group D, member 1
neuroblastoma RAS viral (v-ras) oncogene homolog
osteoclast stimulating factor 1
PAP associated domain containing 7
PERP, TP53 apoptosis effector
profilin 2
phosphatidylinositol-4-phosphate 3-kinase, catalytic subunit type 2 beta
phosphatidylinositol-4-phosphate 3-kinase, catalytic subunit beta
pleckstrin homology domain containing, family A member 3
pancreatic lipase
proline-rich nuclear receptor coactivator 2
POC1 centriolar protein B
protein phosphatase 1, regulatory subunit 12A
protein phosphatase 1, regulatory subunit 14A
protein phosphatase 1, regulatory subunit 21
protein phosphatase 1, regulatory subunit 27
protein kinase C, iota
protein kinase D3
protein tyrosine phosphatase type IVA, member 2
pseudouridylate synthase 1
ralA binding protein 1
RAP1B, member of RAS oncogene family
RAP2A, member of RAS oncogene family
RAS p21 protein activator 2
Gene Name
RCC1 domain containing 1
REST corepressor 1
v-rel avian reticuloendotheliosis viral oncogene homolog A
RIO kinase 3
ring finger protein 19A, E3 ubiquitin protein ligase
ring finger protein 24
RPA interacting protein
retinoid X receptor, alpha
sphingomyelin synthase 2
solute carrier family 7 (cationic amino acid transporter, y+ system), member 2
SMAD family member 3
sorting nexin 2
Sp4 transcription factor
SRSF protein kinase 2
serine-rich single-pass membrane protein 1-like
ST6-N-acetylgalactosaminide alpha-2,6-sialyltransferase 4

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GenBank ID	R ²	p-value
XM_005606246	0.74	5.09E-11
XM_001494640	0.73	1.34E-10
XM_001504257	0.73	1.54E-10
XM_005602174	0.73	1.05E-10
XM_001488883	0.72	2.65E-10
XM_003362986	0.71	4.16E-10
XM_005608661	0.76	1.38E-11
XM_005605874	0.83	1.90E-12
XM_001492713	0.82	1.06E-11
XM_003362712	0.71	4.83E-10
XM_001499859	0.75	2.59E-11
XM_001917122	0.77	3.11E-10
XM_001915845	0.72	1.65E-10
XM_001490367	0.71	3.95E-10
XM_005611644	0.70	6.40E-10
XM_001494690	0.76	1.04E-11
XM_005610782	0.70	6.12E-10
XM_005609781	0.74	7.35E-11
XM_005606070	0.71	3.60E-10
XM_001496252	0.73	1.33E-10
XM_005611196	0.73	1.03E-10
XM_001501208	0.73	1.26E-10
XM_001492686	0.72	1.63E-10
XM_005603731	0.73	1.26E-10
XM_005611588	0.78	3.79E-12
XM_001501750	0.78	4.60E-12
NM_001114144	0.77	7.48E-12
XM_001497018	0.72	1.94E-10
XM_001917559	0.76	1.41E-11
XM_005596127	0.73	1.54E-10
XM_005611808	0.71	3.76E-10
NM_001257179	0.80	3.66E-11
XM_005601550	0.70	5.32E-10
XM_001501945	0.71	3.54E-10
XM_001499862	0.78	2.46E-12
XM_001917056	0.75	3.24E-11
-	0.73	1.50E-10
XM_005602772	0.72	1.78E-10
XM_005606632	0.75	3.27E-11
XM_005597099	0.75	2.80E-11
XM_005596704	0.72	2.12E-10
XM_001502859	0.72	2.16E-10
XM_005604261	0.70	5.56E-10
XM_005607934	0.71	3.65E-10
XM_005602807	0.73	1.41E-10
XM_005602157	0.74	6.77E-11
XM_001490222	0.79	1.82E-12
XM_005601544	0.82	1.04E-11
XM_005598672	0.73	1.01E-10
NM_001159691	0.81	1.81E-11
XM_001915741	0.74	6.10E-11
XM_005602581	0.72	1.75E-10

XM_001492879	0.75	2.15E-11
-	0.75	3.23E-11
XM_001493795	0.72	1.71E-10
NM_001082506	0.71	3.53E-10
XM_001503543	0.76	5.84E-10
XM_001916143	0.71	3.16E-10
XM_001498188	0.73	9.83E-11
XM_005600540	0.73	1.49E-10
XM_001916737	0.76	1.10E-11
XM_001916634	0.76	1.05E-11
XM_005609829	0.74	3.70E-09
XM_005610155	0.78	3.50E-12
XM_005607765	0.76	1.94E-11
XM_001491656	0.73	1.28E-10
XM_005607221	0.77	4.83E-12
XM_005609039	0.73	1.02E-10
XM_005614299	0.70	7.01E-10
GenBank ID	R²	p-value
XM_001494122	0.76	2.04E-11
XM_005608241	0.76	1.52E-11
-	0.71	3.79E-10
XM_001502827	0.77	4.92E-12
XM_001489765	0.79	1.48E-12
XM_005603294	0.77	4.96E-12
XM_005609826	0.74	6.07E-11
XM_005604279	0.72	2.56E-10
-	0.72	2.48E-10
XM_001492896	0.73	1.01E-10
XM_005601271	0.75	3.62E-11
XM_001502346	0.71	3.35E-10
XM_001915795	0.71	2.04E-08
XM_005611170	0.72	2.05E-10
NM_001099765	0.74	7.78E-11
XM_005603708	0.72	2.33E-10
XM_003364440	0.79	1.93E-12
-	0.76	1.65E-11
XM_005598266	0.71	2.89E-10
-	0.74	7.63E-11
XM_005600996	0.75	3.42E-11
XM_005611373	0.72	1.91E-10
-	0.75	3.06E-11
-	0.73	1.14E-10
XM_005613675	0.72	1.59E-10
-	0.73	1.09E-10
XM_005606656	0.78	2.77E-12
XM_005608727	0.79	1.08E-12
XM_005598179	0.79	6.81E-11
XM_001490455	0.79	7.45E-11
XM_001489572	0.77	8.47E-12
XM_005604592	0.77	5.54E-12
XM_005606736	0.77	5.59E-10
XM_003365264	0.74	7.21E-11

XM_005603016	0.78	3.21E-12
XM_001498313	0.79	9.22E-13
XM_005608251	0.72	1.72E-10
XM_001495977	0.82	1.50E-13
XM_005599294	0.71	4.29E-10
XM_001503916	0.74	5.84E-11
XM_001495643	0.78	2.41E-12
XM_005605162	0.71	3.98E-10
XM_005611551	0.73	1.43E-10
XM_001498602	0.76	1.58E-11
XM_005603529	0.75	2.31E-11
XM_005597437	0.73	1.32E-10
XM_001500064	0.73	1.22E-10
XM_005605132	0.71	4.06E-10
XM_005604354	0.73	1.40E-10
XM_001504417	0.74	7.50E-11
XM_005601068	0.78	2.25E-12
XM_005609582	0.78	3.22E-12
XM_001495416	0.72	1.70E-10
XM_001917545	0.73	1.14E-10
NM_001163949	0.70	5.93E-10
XM_003364436	0.73	1.05E-10
XM_005606498	0.78	2.25E-12
XM_005606719	0.72	1.58E-10
XM_005596224	0.77	4.26E-10
XM_005600286	0.78	4.33E-12
XM_001488397	0.71	3.27E-10
XM_001494860	0.79	7.94E-11
XM_001500870	0.71	3.81E-10
XM_001503862	0.73	9.08E-11
XM_005612700	0.79	1.02E-12
XM_001914741	0.70	5.47E-10
-	0.72	2.84E-10
XM_005601374	0.71	3.90E-10
XM_005601063	0.79	1.31E-12
GenBank ID	R²	p-value
XM_005603297	0.76	1.13E-11
-	0.74	6.00E-11
XM_005598458	0.73	1.21E-10
XM_005612766	0.73	1.02E-10
XM_001492262	0.71	4.89E-10
XM_003363897	0.76	1.06E-11
XM_001504740	0.70	6.50E-10
XM_005605923	0.72	2.55E-10
-	0.77	9.70E-12
XM_005606363	0.81	2.62E-11
XM_005602977	0.81	2.47E-11
-	0.72	2.30E-10
XM_001497653	0.72	2.64E-10
XM_005609056	0.71	2.91E-10
XM_001502973	0.73	1.41E-10
XM_001501330	0.75	2.18E-11

XM_001490975	0.71	3.62E-10
XM_005599869	0.74	5.17E-11
NM_001114149	0.75	3.11E-11
XM_003362237	0.78	1.75E-10
XM_005605374	0.79	1.81E-12
XM_001501382	0.75	2.98E-11
XM_005613141	0.73	1.37E-10
XM_005607612	0.80	6.12E-11
XM_003364217	0.71	4.49E-10
XM_001915050	0.73	1.06E-10
-	0.78	2.13E-12
XR_044458	0.74	5.56E-11
XM_001917568	0.82	7.04E-14
XM_005602776	0.81	1.93E-13
XM_005596704	0.73	8.94E-11
XM_001502943	0.72	2.36E-10
XM_005609006	0.77	5.29E-12
XM_005605161	0.76	1.28E-11
XM_001916939	0.75	3.22E-11
XM_005614484	0.70	6.43E-10
XM_001915898	0.73	1.06E-10
XM_005604688	0.72	2.84E-10
XM_001492879	0.70	5.50E-10
XM_001494359	0.74	6.44E-11
XM_005603294	0.73	1.54E-10
XM_005604168	0.70	6.30E-10
XM_005610220	0.74	6.82E-11
XM_005611198	0.75	1.18E-09
XM_005612322	0.75	3.91E-11
XM_005612695	0.74	5.82E-11
XR_289110	0.71	4.13E-10
-	0.72	2.71E-10
-	0.73	8.74E-11
-	0.72	1.86E-10
-	0.70	5.55E-10
-	0.76	1.35E-11
-	0.78	2.14E-12
-	0.78	3.86E-12
-	0.79	2.04E-12
-	0.78	2.54E-10
-	0.79	6.72E-11
-	0.71	4.25E-10
-	0.79	1.02E-10
-	0.76	7.07E-10
-	0.76	1.48E-11
-	0.78	2.63E-12
-	0.77	8.99E-12
-	0.75	4.02E-11
-	0.74	4.12E-11
-	0.78	2.70E-10
-	0.76	1.75E-11
-	0.71	4.53E-10
-	0.76	1.16E-11

-	0.75	2.21E-11
-	0.72	1.76E-10
-	0.70	6.48E-10
-	0.76	1.74E-11
-	0.80	5.71E-11
-	0.76	1.89E-11

For Review Only

Probe ID	Gene Symbol
A_69_P068776	<i>ABCG4</i>
A_69_P070056	<i>ACP5</i>
A_69_P022606	<i>ACTN1</i>
A_69_P001811	<i>ACTN3</i>
A_69_P045916	<i>ACTN4</i>
A_69_P041871	<i>ACVR1C</i>
A_69_P008266	<i>ADCK3</i>
A_69_P081106	<i>ADCY7</i>
A_69_P019603	<i>ADCY9</i>
A_69_P061916	<i>AFAP1L1</i>
A_69_P076992	<i>ALG14</i>
A_69_P122103	<i>AMOT</i>
A_69_P044376	<i>ANGPT1</i>
A_69_P012111	<i>APBB1IP</i>
A_69_P018751	<i>APOBR</i>
A_69_P089106	<i>ARHGAP10</i>
A_69_P012164	<i>ARHGAP21</i>
A_69_P050866	<i>ARL4C</i>
A_69_P053482	<i>ATF7</i>
A_69_P022542	<i>ATP6V1D</i>
A_69_P108917	<i>BAIAP2</i>
A_69_P047386	<i>BCL2L12</i>
A_69_P042991	<i>BMPR2</i>
A_69_P088406	<i>BNIP3L</i>
A_69_P024846	<i>BPIFB1</i>
A_69_P090123	<i>CA5B</i>
A_69_P094167	<i>CACUL1</i>
A_69_P030996	<i>CBLB</i>
A_69_P031626	<i>CBX4</i>
A_69_P031633	<i>CBX8</i>
A_69_P064757	<i>CCDC117</i>
A_69_P085741	<i>CCDC30</i>
A_69_P035931	<i>CCDC42</i>
A_69_P030197	<i>CCDC50</i>
A_69_P023776	<i>CEP170B</i>
A_69_P016209	<i>CGGBP1</i>
A_69_P025091	<i>CNBD2</i>
A_69_P053561	<i>COPZ1</i>
A_69_P106881	<i>CORO1C</i>
A_69_P005016	<i>CP</i>
A_69_P128876	<i>CPNE1</i>
A_69_P020421	<i>CSRP2</i>
A_69_P107507	<i>CTNNBIP1</i>
A_69_P011571	<i>CTTN</i>
A_69_P118036	<i>CYP4F3</i>
A_69_P046701	<i>DACT3</i>
A_69_P067516	<i>DAPK3</i>
A_69_P078366	<i>DDC</i>

A_69_P071084	<i>DGAT2</i>
A_69_P054011	<i>DNAJC14</i>
A_69_P001557	<i>DNASE1</i>
A_69_P093546	<i>DNASE1L1</i>
A_69_P070136	<i>DOCK6</i>
A_69_P058866	<i>DQX1</i>
A_69_P065306	<i>DTX1</i>
A_69_P042542	<i>DUSP19</i>
A_69_P001401	<i>EFNB2</i>
A_69_P100881	<i>EGLN3</i>
A_69_P059377	<i>EHBP1</i>
A_69_P079446	<i>ELMO1</i>
A_69_P100586	<i>EMC9</i>
A_69_P025099	<i>EPB41L1</i>
A_69_P033426	<i>ERBB2</i>
A_69_P054056	<i>ERBB3</i>
A_69_P022101	<i>ERO1</i>
A_69_P078887	<i>ETV1</i>
A_69_P079916	<i>EXOC4</i>
A_69_P074486	<i>F11R</i>
A_69_P030556	<i>FAM162A</i>
Probe ID	Gene Symbol
A_69_P012341	<i>FAM188A</i>
A_69_P027838	<i>FAM32A</i>
A_69_P076282	<i>FAM46C</i>
A_69_P044666	<i>FAM49B</i>
A_69_P036935	<i>FAM65B</i>
A_69_P036221	<i>FAM83G</i>
A_69_P087391	<i>FBLIM1</i>
A_69_P015764	<i>FGF20</i>
A_69_P093532	<i>FLNA</i>
A_69_P124111	<i>FOXN3</i>
A_69_P040016	<i>FRY</i>
A_69_P083836	<i>FRYL</i>
A_69_P096828	<i>FSD2</i>
A_69_P022506	<i>FUT8</i>
A_69_P068601	<i>FXVD6</i>
A_69_P049426	<i>FYN</i>
A_69_P020601	<i>GALNT4</i>
A_69_P053150	<i>GALNT6</i>
A_69_P078816	<i>GLCC1</i>
A_69_P020386	<i>GLIPR1</i>
A_69_P107702	<i>GNG12</i>
A_69_P014576	<i>GPR107</i>
A_69_P056031	<i>GPX1</i>
A_69_P094138	<i>GRK5</i>
A_69_P082396	<i>GSE1</i>
A_69_P014696	<i>GTF3C4</i>
A_69_P005221	<i>H1T</i>

A_69_P022371	<i>HIF1A</i>
A_69_P060656	<i>HPCAL1</i>
A_69_P065156	<i>HSPB8</i>
A_69_P108979	<i>IGF1R</i>
A_69_P069726	<i>IL27RA</i>
A_69_P047436	<i>IL4I1</i>
A_69_P043336	<i>IL7</i>
A_69_P015946	<i>IRF2</i>
A_69_P052387	<i>ITPR2</i>
A_69_P033121	<i>JUP</i>
A_69_P040726	<i>KCTD12</i>
A_69_P051327	<i>KDM5A</i>
A_69_P060666	<i>KLF11</i>
A_69_P033516	<i>LASP1</i>
A_69_P003766	<i>LIPA</i>
A_69_P027766	<i>LOC100062102</i>
A_69_P040392	<i>LRCH1</i>
A_69_P036943	<i>LRRC16A</i>
A_69_P001581	<i>LY96</i>
A_69_P043761	<i>LYN</i>
A_69_P063142	<i>MAN2A1</i>
A_69_P049017	<i>MANEA</i>
A_69_P054542	<i>MDM1</i>
A_69_P057669	<i>MED12L</i>
A_69_P003381	<i>MET</i>
A_69_P087516	<i>MFN2</i>
A_69_P085866	<i>MFSD2A</i>
A_69_P071086	<i>MOGAT2</i>
A_69_P055931	<i>MST1R</i>
A_69_P075351	<i>MUC1</i>
A_69_P034521	<i>MYO1D</i>
A_69_P027901	<i>MYO9B</i>
A_69_P056271	<i>NBEAL2</i>
A_69_P057326	<i>NCK1</i>
A_69_P033646	<i>NFE2L1</i>
A_69_P083732	<i>NMU</i>
A_69_P087531	<i>NPPB</i>
A_69_P095666	<i>PALD1</i>
A_69_P025606	<i>PCIF1</i>
A_69_P089541	<i>PDE5A</i>
A_69_P050731	<i>PDE6D</i>
A_69_P106316	<i>PDIA4</i>
Probe ID	Gene Symbol
A_69_P107322	<i>PDIA5</i>
A_69_P060631	<i>PDIA6</i>
A_69_P108914	<i>PDIA7</i>
A_69_P110291	<i>PDIA9</i>
A_69_P061116	<i>PDLIM7</i>
A_69_P091373	<i>PDZD11</i>

A_69_P022192	<i>PELI2</i>
A_69_P002676	<i>PER2</i>
A_69_P090302	<i>PHEX</i>
A_69_P089720	<i>PLA2G12A</i>
A_69_P057056	<i>PLCL2</i>
A_69_P051521	<i>PLEKHG6</i>
A_69_P022561	<i>PLEKHH1</i>
A_69_P021986	<i>PLXNB2</i>
A_69_P020597	<i>POC1B</i>
A_69_P072381	<i>PPFIBP2</i>
A_69_P085736	<i>PPIH</i>
A_69_P045136	<i>PPP1R16A</i>
A_69_P059267	<i>PPP3R1</i>
A_69_P126751	<i>PRKCE</i>
A_69_P079241	<i>PRR15</i>
A_69_P032411	<i>PRR29</i>
A_69_P073082	<i>PRRG4</i>
A_69_P070846	<i>PRSS23</i>
A_69_P026211	<i>PTK6</i>
A_69_P074511	<i>PVRL4</i>
A_69_P057254	<i>RAB6B</i>
A_69_P040892	<i>RAP2A</i>
A_69_P081151	<i>RBL2</i>
A_69_P045521	<i>RBM42</i>
A_69_P036826	<i>RNF144B</i>
A_69_P029167	<i>ROPN1L</i>
A_69_P090651	<i>RPGR</i>
A_69_P095836	<i>SEC24C</i>
A_69_P066961	<i>SERPINB5</i>
A_69_P045106	<i>SLC39A4</i>
A_69_P089306	<i>SLC7A11</i>
A_69_P091401	<i>SLC7A3</i>
A_69_P002581	<i>SLC7A9</i>
A_69_P019616	<i>SLX4</i>
A_69_P004687	<i>SMAD5</i>
A_69_P062916	<i>SNX24</i>
A_69_P025751	<i>SPATA2</i>
A_69_P029232	<i>SRD5A1</i>
A_69_P017976	<i>SRRM3</i>
A_69_P069486	<i>ST3GAL4</i>
A_69_P031116	<i>ST3GAL6</i>
A_69_P014316	<i>ST6GALNAC6</i>
A_69_P052407	<i>STK38L</i>
A_69_P097806	<i>STOML1</i>
A_69_P012022	<i>SVIL</i>
A_69_P072586	<i>SWAP70</i>
A_69_P054906	<i>SYN2</i>
A_69_P090501	<i>TAB3</i>
A_69_P124301	<i>TAOK3</i>

A_69_P075782	<i>TDRKH</i>
A_69_P004656	<i>TH</i>
A_69_P007761	<i>TIAM2</i>
A_69_P051432	<i>TIGAR</i>
A_69_P067481	<i>TJP3</i>
A_69_P055581	<i>TMEM110</i>
A_69_P068858	<i>TMEM136</i>
A_69_P093510	<i>TMEM187</i>
A_69_P013231	<i>TMEM246</i>
A_69_P020241	<i>TMEM8A</i>
A_69_P012322	<i>TRDMT1</i>
A_69_P002576	<i>TRIB1</i>
A_69_P072181	<i>TRIM3</i>
A_69_P067156	<i>TSHZ1</i>
Probe ID	Gene Symbol
A_69_P096671	<i>TSPAN14</i>
A_69_P019371	<i>TXNDC11</i>
A_69_P011469	<i>UNC93B1</i>
A_69_P068821	<i>USP2</i>
A_69_P084773	<i>UVSSA</i>
A_69_P076832	<i>VAV3</i>
A_69_P054921	<i>VGLL4</i>
A_69_P065591	<i>VPS37B</i>
A_69_P016042	<i>WDR17</i>
A_69_P080186	<i>WEE2</i>
A_69_P064751	<i>XBP1</i>
A_69_P067151	<i>ZADH2</i>
A_69_P105271	<i>ZBTB38</i>
A_69_P018606	<i>ZG16</i>
A_69_P095946	<i>ZMIZ1</i>
A_69_P012731	<i>ZMYND11</i>
A_69_P080416	<i>ZYX</i>
A_69_P102941	unnamed
A_69_P129542	unnamed
A_69_P104252	unnamed
A_69_P116497	unnamed
A_69_P111532	unnamed
A_69_P111671	unnamed
A_69_P111680	unnamed
A_69_P111726	unnamed
A_69_P112046	unnamed
A_69_P112066	unnamed
A_69_P117536	unnamed
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A_69_P113850	unnamed
A_69_P114321	unnamed
A_69_P114542	unnamed
A_69_P114620	unnamed
A_69_P117796	unnamed

A_69_P123391	unnamed
A_69_P116161	unnamed
A_69_P024021	unnamed
A_69_P105128	unnamed
A_69_P093866	unnamed
A_69_P104411	unnamed
A_69_P104471	unnamed
A_69_P027776	unnamed
A_69_P093261	unnamed
A_69_P101687	unnamed
A_69_P101688	unnamed
A_69_P104412	unnamed
A_69_P104472	unnamed
A_69_P104473	unnamed
A_69_P125781	unnamed
A_69_P104413	unnamed

Gene Name	GenBank ID
ATP-binding cassette, sub-family G (WHITE), member 4	XM_001917435
acid phosphatase 5, tartrate resistant	NM_001246672
actinin, alpha 1	CX592246
actinin, alpha 3	NM_001163869
actinin, alpha 4	XM_005614733
activin A receptor, type IC	-
AarF domain containing kinase 3	-
adenylate cyclase 7	XM_005608520
adenylate cyclase 9	XM_001502248
actin filament associated protein 1-like 1	XM_005599697
ALG14, UDP-N-acetylglucosaminyltransferase subunit	CX598500
angiomin	XM_005614426
angiopoietin 1	XM_001494946
amyloid beta (A4) precursor protein-binding, family B, member 1 interacting protein	XM_001915845
apolipoprotein B receptor	XM_001496643
Rho GTPase activating protein 10	XM_005607916
Rho GTPase activating protein 21	XM_001496428
ADP-ribosylation factor-like 4C	XM_005610737
activating transcription factor 7	CX602697
ATPase, H ⁺ transporting, lysosomal 34kDa, V1 subunit D	JL616790
BAI1-associated protein 2	XM_001489343
BCL2-like 12 (proline rich)	CX599899
bone morphogenetic protein receptor, type II (serine/threonine kinase)	-
BCL2/adenovirus E1B 19kDa interacting protein 3-like	JL638007
BPI fold containing family B, member 1	XM_001498737
carbonic anhydrase VB, mitochondrial	XM_005614010
CDK2-associated, cullin domain 1	XM_001494080
Cbl proto-oncogene B, E3 ubiquitin protein ligase	XM_001503354
chromobox homolog 4	XM_005597875
chromobox homolog 8	XM_001490372
coiled-coil domain containing 117	XM_005612536
coiled-coil domain containing 30	XM_005607146
coiled-coil domain containing 42	XM_001504830
coiled-coil domain containing 50	XM_005602100
centrosomal protein 170B	XM_005605564
CGG triplet repeat binding protein 1	XM_005606097
cyclic nucleotide-binding domain-containing protein 2-like	XM_001501888
coatamer protein complex, subunit zeta 1	JL616259
coronin, actin binding protein, 1C	XM_005612502
ceruloplasmin	AF506976
copine I	NM_001171745
cysteine and glycine-rich protein 2	DN508692
catenin, beta interacting protein 1	XM_003364450
cortactin	CX604737
leukotriene-B(4) omega-hydroxylase 2-like	XM_001915237
dishevelled binding antagonist of beta catenin 3	XM_005596344
death-associated protein kinase 3	XM_001503352
dopa decarboxylase (aromatic L-amino acid decarboxylase)	XM_001498321

diacylglycerol O-acyltransferase 2	CD464263
DnaJ (Hsp40) homolog, subfamily C, member 14	XM_001504784
deoxyribonuclease I	NM_001082514
deoxyribonuclease I-like 1	XM_005614646
dedicator of cytokinesis 6	XM_001916366
DEAQ box RNA-dependent ATPase 1	XM_001498853
E3 ubiquitin-protein ligase 1	XM_005612681
dual specificity phosphatase 19	XM_005601623
ephrin-B2	NM_001114943
egl-9 family hypoxia-inducible factor 3	JL640306
EH domain binding protein 1	JL622356
engulfment and cell motility 1	XM_005609300
ER membrane protein complex subunit 9	XM_001918328
erythrocyte membrane protein band 4.1-like 1	CX603690
v-erb-b2 avian erythroblastic leukemia viral oncogene homolog 2	XM_001501105
v-erb-b2 avian erythroblastic leukemia viral oncogene homolog 3	XM_005611415
ER oxidoreductin 1	JL620183
ets variant 1	XM_005609238
exocyst complex component 4	XM_005609413
F11 receptor	XM_001503884
family with sequence similarity 162, member A	JL630852
Gene Name	GenBank ID
family with sequence similarity 188, member A	JL616524
family with sequence similarity 32, member A	BM734656
family with sequence similarity 46, member C	JL624670
family with sequence similarity 49, member B	HQ890119
family with sequence similarity 65, member B	JL637026
family with sequence similarity 83, member G	XM_001918393
filamin binding LIM protein 1	XM_005607500
fibroblast growth factor 20	XM_001488229
filamin A, alpha	XM_001915293
forkhead box N3	XM_005605395
furry homolog (Drosophila)	-
FRY-like	JL620901
fibronectin type III and SPRY domain containing 2	XM_005602758
fucosyltransferase 8 (alpha (1,6) fucosyltransferase)	JL641525
FXYD domain containing ion transport regulator 6	XM_001502701
tyrosine-protein kinase FYN	XM_005596884
UDP-N-acetyl-alpha-D-galactosamine:polypeptide N-acetylgalactosaminyltransferase 4	XM_005606501
UDP-N-acetyl-alpha-D-galactosamine:polypeptide N-acetylgalactosaminyltransferase 6	XM_005611198
glucocorticoid induced transcript 1	JL616964
GLI pathogenesis-related 1	XM_005606486
guanine nucleotide binding protein (G protein), gamma 12	JL629372
G-protein coupled receptor 107	XM_005606041
glutathione peroxidase 1	NM_001166479
G-protein coupled receptor kinase 5	XM_005602200
Gse1 coiled-coil protein	XM_005608471
general transcription factor IIIc, polypeptide 4, 90kDa	JL624968
testis-specific histone H1t	NM_001256951

hypoxia inducible factor 1, alpha subunit (basic helix-loop-helix transcription factor)	HQ890034
hippocalcin-like 1	XM_001503553
heat shock 22kDa protein 8	XM_001490413
insulin-like growth factor 1 receptor	XM_001489765
interleukin 27 receptor, alpha	DN506127
interleukin 4 induced 1	XM_005596742
interleukin 7	JL624638
interferon regulatory factor 2	XM_005606399
inositol 1,4,5-trisphosphate receptor, type 2	XM_005610991
junction plakoglobin	XM_005597404
potassium channel tetramerization domain containing 12	-
lysine (K)-specific demethylase 5A	JL620095
Kruppel-like factor 11	XM_005600308
LIM and SH3 protein 1	XM_005614843
lipase A, lysosomal acid, cholesterol esterase	CX595793
cytochrome P450 4F6-like	XM_001500818
leucine-rich repeats and calponin homology (CH) domain containing 1	JL621073
leucine rich repeat containing 16A	JL639121
lymphocyte antigen 96	NM_001081898
v-yes-1 Yamaguchi sarcoma viral related oncogene homolog	JL637794
mannosidase, alpha, class 2A, member 1	HQ889850
mannosidase, endo-alpha	JL640542
Mdm1 nuclear protein homolog (mouse)	XM_005611424
mediator complex subunit 12-like	XM_001917728
met proto-oncogene (hepatocyte growth factor receptor)	NM_001114147
mitofusin 2	XM_005607618
major facilitator superfamily domain containing 2A	XM_003364401
monoacylglycerol O-acyltransferase 2	XM_005612032
macrophage stimulating 1 receptor (c-met-related tyrosine kinase)	XM_001494042
mucin 1, cell surface associated	XM_005610050
myosin ID	XM_005597952
myosin IXB	XM_005604167
neurobeachin-like 2	XM_001916568
NCK adaptor protein 1	CD465296
nuclear factor, erythroid 2-like 1	XM_005597463
neuromedin u	-
natriuretic peptide B	XM_005607522
phosphatase domain containing, paladin 1	XM_005602582
PDX1 C-terminal inhibiting factor 1	CD471596
phosphodiesterase 5A, cGMP-specific	XM_001502305
phosphodiesterase 6D, cGMP-specific, rod, delta	JL638433
protein disulfide isomerase family A member 4	CX604092
Gene Name	GenBank ID
protein disulfide isomerase family A member 5	DN509844
protein disulfide isomerase family A, member 6	JL633638
protein disulfide isomerase family A, member 7	CX599622
protein disulfide isomerase family A, member 9	CX602538
PDZ and LIM domain protein 7	CX604663
PDZ domain containing 11	JL615863

pellino E3 ubiquitin protein ligase family member 2	XM_001915654
period homolog 2 (Drosophila)	XM_001496867
phosphate regulating endopeptidase homolog, X-linked	XM_001493470
phospholipase A2, group XIIA	JL640117
phospholipase C-like 2	JL638527
pleckstrin homology domain containing, family G (with RhoGef domain) member 6	XM_001495448
pleckstrin homology domain containing, family H (with MyTH4 domain) member 1	XM_001916186
plexin B2	XM_001914904
POC1 centriolar protein B	XM_005606498
PTPRF interacting protein, binding protein 2 (liprin beta 2)	JL625393
peptidylprolyl isomerase H (cyclophilin H)	CX601342
protein phosphatase 1 regulatory subunit 16A	XM_005613420
protein phosphatase 3, regulatory subunit B, alpha	XM_001493664
protein kinase C, epsilon	XM_001499053
proline rich 15	XM_005609277
chromosome 11 open reading frame, human C17orf72	XM_005597272
proline rich Gla (G-carboxyglutamic acid) 4 (transmembrane)	XM_001502780
protease, serine, 23	CX603637
protein tyrosine kinase 6	XM_001492768
poliovirus receptor-related 4	XM_005609870
RAB6B, member RAS oncogene family	XM_005600940
Ras-related protein 2A	XM_005601374
retinoblastoma-like 2 (p130)	JL639792
RNA binding motif protein 42	XM_001492237
ring finger protein 144B	XM_005603598
rhopilin associated tail protein 1-like	XM_001917350
retinitis pigmentosa GTPase regulator	JL628161
SEC24 family, member C (S. cerevisiae)	XM_005602483
serpin peptidase inhibitor, clade B (ovalbumin), member 5	XM_001490854
solute carrier family 39 (zinc transporter), member 4, zrt- and Irt-like protein 4	XM_005613417
solute carrier family 7 (anionic amino acid transporter light chain, xc- system), member 11	-
solute carrier family 7 (cationic amino acid transporter, y+ system), member 3	JL624757
solute carrier family 7 (amino acid transporter light chain, bo,+ system), member 9	XM_001489968
structure-specific endonuclease subunit 4	XM_001499278
SMAD family member 5	NM_001163888
sorting nexin 24	XM_005599481
spermatogenesis associated 2	XM_001501197
steroid-5-alpha-reductase, alpha polypeptide 1	XM_005604356
serine/arginine repetitive matrix 3	XM_005598669
ST3 beta-galactoside alpha-2,3-sialyltransferase 4	XM_005611701
ST3 beta-galactoside alpha-2,3-sialyltransferase 6	JL639298
ST6-N-acetylgalactosaminide alpha-2,6-sialyltransferase 6	XM_005605807
serine/threonine kinase 38 like	JL615980
stomatin (EPB72)-like 1	XM_005602944
supervillin	CX594198
SWAP switching B-cell complex 70kDa subunit	CX596099
synapsin II	JL636065
TGF-beta activated kinase 1/MAP3K7 binding protein 3	XM_005614055
TAO kinase 3	JL618245

tudor and KH domain containing	JL621221
tyrosine hydroxylase	AB071421
T-cell lymphoma invasion and metastasis 2	CX604356
chromosome 6 open reading frame, human C12orf5	XM_001491392
tight junction protein 3	XM_005611759
transmembrane protein 110	XM_005600557
transmembrane protein 136	XM_001503270
transmembrane protein 187	XM_005614633
transmembrane protein 246	XM_005605664
transmembrane protein 8A	XM_005599125
tRNA aspartic acid methyltransferase 1	JL618941
tribbles homolog 1 (Drosophila)	XM_001497655
tripartite motif containing 3	XM_005612118
teashirt zinc finger homeobox 1	XM_005612978
Gene Name	GenBank ID
tetraspanin 14	CX605253
thioredoxin domain containing 11	CX605252
unc-93 homolog B1 (C. elegans)	CX598557
ubiquitin specific peptidase 2	XM_001501200
UV-stimulated scaffold protein A	XM_005608947
vav 3 guanine nucleotide exchange factor	CX599233
vestigial like 4 (Drosophila)	XM_005600368
vacuolar protein sorting 37 homolog B (S. cerevisiae)	XM_005612623
WD repeat domain 17	XM_005606414
WEE1 homolog 2 (S. pombe)	XM_001496085
basic leucine zipper transcriptional factor ATF-like 2-like	DN507369
zinc binding alcohol dehydrogenase domain containing 2	XM_005612977
zinc finger and BTB domain containing 38	CD536068
zymogen granule protein 16	XM_001501605
zinc finger, MIZ-type containing 1	XM_005602523
zinc finger, MYND-type containing 11	JL619470
zyxin	CX602081
-	CD464165
-	CD465830
-	CD468881
-	CX592223
-	CX604925
-	CX605160
-	CX605161
-	CX605229
-	CX605870
-	CX605920
-	DN508257
-	DN508666
-	DN509305
-	DN510125
-	DN510508
-	DN510680
-	JL621232

-	JL640016
-	JL640533
-	XM_001489672
-	XM_001916562
-	XM_005602157
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-	-
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-	-
-	-
-	-
-	-
-	-
-	-
-	-

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R²	p-value
0.77	5.28E-10
0.72	7.47E-09
0.77	2.86E-10
0.77	3.73E-10
0.80	4.34E-11
0.72	1.00E-08
0.70	2.71E-08
0.76	9.35E-10
0.78	1.90E-10
0.70	2.56E-08
0.72	8.12E-09
0.72	1.22E-08
0.77	3.27E-10
0.73	1.16E-10
0.77	3.20E-10
0.81	1.29E-11
0.78	1.51E-10
0.75	1.63E-09
0.72	9.86E-09
0.70	2.61E-08
0.73	6.76E-09
0.75	1.13E-09
0.75	1.22E-09
0.75	1.79E-09
0.72	1.10E-08
0.83	3.63E-12
0.72	1.25E-08
0.72	1.09E-08
0.79	1.05E-10
0.73	6.70E-09
0.71	2.03E-08
0.78	2.41E-10
0.76	1.04E-09
0.75	1.48E-09
0.79	8.43E-11
0.74	2.48E-09
0.78	1.97E-10
0.70	2.44E-08
0.78	1.97E-10
0.72	1.62E-10
0.72	1.11E-08
0.76	8.14E-10
0.74	2.49E-09
0.71	3.82E-10
0.74	4.39E-11
0.80	3.55E-11
0.82	9.25E-12
0.72	1.03E-08

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0.81	1.66E-11
0.74	3.74E-09
0.76	6.25E-10
0.72	1.11E-08
0.75	1.51E-09
0.80	5.64E-11
0.77	3.38E-10
0.77	5.22E-10
0.71	1.67E-08
0.72	1.23E-08
0.73	6.00E-09
0.78	2.09E-10
0.73	4.34E-09
0.72	1.04E-08
0.78	1.72E-10
0.79	1.13E-10
0.70	5.99E-10
0.74	2.93E-09
0.76	7.98E-10
0.76	6.08E-10
0.72	1.24E-08
R²	p-value
0.73	5.15E-09
0.72	1.02E-08
0.74	3.13E-09
0.75	1.56E-09
0.71	1.93E-08
0.74	3.15E-09
0.79	9.52E-11
0.81	1.20E-11
0.76	6.34E-10
0.82	5.12E-12
0.71	1.96E-08
0.73	6.24E-09
0.71	1.36E-08
0.74	2.66E-09
0.77	4.28E-10
0.70	2.39E-08
0.76	9.59E-10
0.74	2.21E-09
0.78	1.74E-10
0.73	6.95E-09
0.74	2.71E-09
0.72	1.26E-08
0.77	3.23E-10
0.83	4.27E-12
0.72	2.81E-10
0.76	8.58E-10
0.75	2.68E-11

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0.71	3.03E-09
0.72	2.33E-10
0.74	3.18E-09
0.71	4.52E-10
0.76	1.67E-11
0.77	3.42E-10
0.79	1.32E-10
0.74	2.63E-09
0.74	3.88E-09
0.73	4.30E-09
0.78	1.92E-10
0.71	1.50E-08
0.71	4.54E-10
0.79	9.32E-11
0.72	1.04E-08
0.71	4.58E-10
0.72	2.10E-10
0.80	5.62E-11
0.78	2.57E-10
0.80	4.49E-11
0.75	1.85E-09
0.76	9.27E-10
0.75	1.43E-09
0.73	9.90E-11
0.73	6.11E-09
0.74	2.59E-09
0.77	3.82E-10
0.75	1.69E-09
0.75	1.98E-09
0.79	6.43E-11
0.78	1.94E-10
0.71	4.93E-10
0.78	1.83E-10
0.78	1.37E-10
0.75	1.34E-09
0.77	2.99E-10
0.77	7.02E-12
0.79	9.90E-11
0.75	1.87E-09
0.79	1.46E-12
0.77	3.62E-10
0.72	8.86E-09
R²	p-value
0.78	2.38E-10
0.77	4.56E-10
0.80	2.88E-11
0.76	8.25E-10
0.76	7.07E-10
0.71	1.52E-08

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0.73	6.34E-09
0.70	6.76E-10
0.72	9.75E-09
0.73	9.75E-11
0.80	5.46E-11
0.81	1.89E-11
0.79	6.90E-11
0.72	1.07E-08
0.74	2.43E-09
0.72	1.07E-08
0.76	8.62E-10
0.73	5.96E-09
0.74	3.05E-09
0.71	1.59E-08
0.73	5.16E-09
0.75	1.91E-09
0.75	2.12E-09
0.73	5.45E-09
0.80	5.11E-11
0.75	1.55E-09
0.81	2.11E-11
0.74	7.71E-11
0.73	4.88E-09
0.75	1.34E-09
0.82	6.91E-12
0.73	7.22E-09
0.79	9.52E-11
0.75	1.42E-09
0.80	2.82E-11
0.79	1.34E-10
0.73	1.29E-10
0.74	3.17E-09
0.72	7.58E-09
0.82	6.19E-12
0.74	2.68E-09
0.77	3.13E-10
0.74	3.51E-09
0.72	1.04E-08
0.75	1.74E-09
0.82	1.15E-11
0.78	1.61E-10
0.78	1.68E-10
0.81	2.13E-11
0.78	2.03E-10
0.80	3.58E-11
0.74	3.53E-09
0.81	2.66E-11
0.75	1.27E-09
0.70	2.50E-08

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0.74	2.38E-09
0.75	1.56E-09
0.78	2.14E-10
0.70	6.20E-10
0.77	3.95E-10
0.71	1.62E-08
0.72	1.25E-08
0.71	2.12E-08
0.78	1.83E-10
0.71	2.02E-08
0.78	1.63E-10
0.74	2.97E-09
0.75	3.39E-11
0.71	1.41E-08
R²	p-value
0.72	2.08E-10
0.77	3.12E-10
0.73	5.02E-09
0.74	2.84E-09
0.72	7.68E-09
0.75	1.87E-09
0.75	1.26E-09
0.77	2.88E-10
0.74	2.24E-09
0.73	5.41E-09
0.76	8.57E-10
0.73	5.68E-09
0.72	7.59E-09
0.82	4.94E-12
0.79	9.21E-11
0.70	2.73E-08
0.76	8.02E-10
0.71	1.52E-08
0.76	7.18E-10
0.72	8.75E-09
0.70	2.34E-08
0.71	2.00E-08
0.77	3.54E-10
0.72	8.73E-09
0.80	3.01E-11
0.74	3.33E-09
0.70	2.94E-08
0.79	8.29E-11
0.80	2.79E-11
0.71	3.76E-10
0.73	4.40E-09
0.74	2.42E-09
0.75	1.73E-09
0.76	1.08E-09

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0.71	4.73E-10
0.73	6.62E-09
0.78	1.81E-10
0.70	2.40E-08
0.82	6.67E-12
0.74	2.54E-09
0.72	1.15E-08
0.74	6.86E-11
0.77	3.60E-10
0.71	3.55E-10
0.73	6.91E-09
0.74	2.61E-09
0.73	7.20E-09
0.73	7.18E-09
0.73	5.34E-09
0.75	1.87E-09

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Probe ID	Gene Symbol
A 69 P037171	<i>ABT1</i>
A 69 P029221	<i>ADCY2</i>
A 69 P089786	<i>AIMP1</i>
A 69 P027731	<i>AKAP8</i>
A 69 P031451	<i>ALYREF</i>
A 69 P099177	<i>ARHGAP11A</i>
A 69 P052391	<i>ASUN</i>
A 69 P015472	<i>BAG4</i>
A 69 P118176	<i>C11H17orf85</i>
A 69 P075196	<i>CCT3</i>
A 69 P029181	<i>CCT5</i>
A 69 P041216	<i>CDC16</i>
A 69 P008362	<i>CNIH4</i>
A 69 P090147	<i>CTPS2</i>
A 69 P044321	<i>DCAF13</i>
A 69 P081036	<i>DNAJA2</i>
A 69 P004097	<i>EWSR1</i>
A 69 P008177	<i>EXO1</i>
A 69 P050501	<i>FARSB</i>
A 69 P028701	<i>FGF10</i>
A 69 P079282	<i>GARS</i>
A 69 P039456	<i>GCLC</i>
A 69 P112874	<i>GCN20/ABCF1</i>
A 69 P096961	<i>GDPGP1</i>
A 69 P057477	<i>GK5</i>
A 69 P121231	<i>GLS</i>
A 69 P057776	<i>GMPS</i>
A 69 P055621	<i>GNL3</i>
A 69 P084578	<i>GRPEL1</i>
A 69 P066622	<i>HAUS1</i>
A 69 P049716	<i>HINT3</i>
A 69 P083152	<i>HNRNPD</i>
A 69 P001656	<i>HSP90AB1</i>
A 69 P055883	<i>IFRD2</i>
A 69 P089806	<i>INTS12</i>
A 69 P026886	<i>KIAA0020</i>
A 69 P033582	<i>KPNB1</i>
A 69 P054507	<i>LLPH</i>
A 69 P045454	<i>LSR</i>
A 69 P043808	<i>LYPLA1</i>
A 69 P094876	<i>MMS19</i>
A 69 P081011	<i>MYLK3</i>
A 69 P089281	<i>NAA15</i>
A 69 P081863	<i>NIP7</i>
A 69 P054552	<i>NUP107</i>
A 69 P028876	<i>NUP155</i>
A 69 P020891	<i>NUP37</i>
A 69 P042281	<i>OLA1</i>
A 69 P017991	<i>ORAI2</i>

A 69 P114489	<i>PA2G4</i>
A 69 P036651	<i>PAK1IP1</i>
A 69 P045261	<i>PDCD5</i>
A 69 P114728	<i>POC1</i>
A 69 P078256	<i>PPIAL4A</i>
A 69 P061481	<i>RARS</i>
A 69 P025156	<i>RBL1</i>
A 69 P005421	<i>RBM8A</i>
A 69 P024691	<i>REM1</i>
A 69 P036537	<i>RPP40</i>
A 69 P021059	<i>RTCB</i>
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A 69 P028581	<i>SKIV2L</i>
A 69 P098047	<i>SNAPC5</i>
A 69 P046176	<i>SNRPA</i>
A 69 P066156	<i>SNRPD1</i>
A 69 P064087	<i>SNRPD3</i>
A 69 P059146	<i>SNRPG</i>
A 69 P084573	<i>TADA2B</i>
A 69 P038926	<i>TOMM6</i>
A 69 P040996	<i>TPP2</i>
A 69 P018292	<i>TPST1</i>
A 69 P024276	<i>TRMT6</i>
A 69 P008552	<i>UBE2L3</i>
A 69 P063711	<i>UTP15</i>
A 69 P018310	<i>VKORC1L1</i>
A 69 P061061	<i>YKPL</i>
A 69 P107359	unnamed
A 69 P108746	unnamed
A 69 P113536	unnamed
A 69 P113886	unnamed
A 69 P106501	unnamed
A 69 P102251	unnamed
A 69 P121251	unnamed
A 69 P125076	unnamed

Gene Name	GenBank ID	R ²
activator of basal transcription 1	DN505914	0.71
adenylate cyclase 2 (brain)	XM_001917534	0.73
aminoacyl tRNA synthetase complex-interacting multifunctional protein 1	HQ889991	0.72
A kinase (PRKA) anchor protein 8	XM_005604160	0.75
Aly/REF export factor	CX592127	0.72
Rho GTPase activating protein 11A	XM_001503656	0.70
asunder spermatogenesis regulator	JL640653	0.71
BCL2-associated athanogene 4	JL637289	0.72
chromosome 11 open reading frame, human C17orf85	XM_005597667	0.77
chaperonin containing TCP1, subunit 3 (gamma)	JL616238	0.71
chaperonin containing TCP1, subunit 5 (epsilon)	JL615986	0.70
cell division cycle 16	JL617124	0.73
cornichon family AMPA receptor auxiliary protein 4	JL616008	0.73
CTP synthase 2	JL639858	0.71
DDB1 and CUL4 associated factor 13	JL616540	0.72
DnaJ (Hsp40) homolog, subfamily A, member 2	JL615959	0.73
EWS RNA binding protein 1	AY246735	0.71
exonuclease 1	XM_001491483	0.71
phenylalanyl-tRNA synthetase, beta subunit	CD470357	0.71
fibroblast growth factor 10	XM_001498109	0.70
glycyl-tRNA synthetase	JL616340	0.72
glutamate-cysteine ligase, catalytic subunit	XM_001503180	0.72
ATP-binding cassette, sub-family F	DN506754	0.74
GDP-D-glucose phosphorylase 1	XM_001498866	0.71
glycerol kinase 5 (putative)	XM_001494143	0.70
glutaminase	XM_005601737	0.71
guanine monphosphate synthase	XM_001488228	0.73
guanine nucleotide binding protein-like 3 (nucleolar)	JL617410	0.74
GrpE-like 1, mitochondrial (E. coli)	CX595321	0.70
HAUS augmin-like complex, subunit 1	JL615909	0.72
histidine triad nucleotide binding protein 3	XM_005596911	0.73
heterogeneous nuclear ribonucleoprotein D	CX601862	0.70
heat shock protein 90kDa alpha (cytosolic), class B member 1	NM_001081938	0.71
interferon-related developmental regulator 2	CX605566	0.70
integrator complex subunit 12	JL625356	0.72
KIAA0020 ortholog	JL637329	0.73
karyopherin (importin) beta 1	JL624094	0.71
uncharacterized LOC100051841	JL624250	0.71
lipolysis stimulated lipoprotein receptor	DN510482	0.74
lysophospholipase I	JL616264	0.71
MMS19 nucleotide excision repair homolog (S. cerevisiae)	JL623961	0.72
myosin light chain kinase 3	XM_001490251	0.71
N(alpha)-acetyltransferase 15, NatA auxiliary subunit	HQ890152	0.73
NIP7, nucleolar pre-rRNA processing protein	JL616142	0.70
nucleoporin 107kDa	JL619196	0.73
nucleoporin 155kDa	JL620490	0.72
nucleoporin 37kDa	JL616194	0.71
Obg-like ATPase 1	JL616315	0.71
ORAI calcium release-activated calcium modulator 2	XM_005598670	0.71

proliferation-associated 2G4, 38kDa	JL639402	0.71
PAK1 interacting protein 1	JL640568	0.72
programmed cell death 5	JL639889	0.74
predicted POC1	DN510872	0.71
peptidyl-prolyl cis-trans isomerase A-like	DN505218	0.74
arginyl-tRNA synthetase	XM_001503271	0.70
retinoblastoma-like 1 (p107)	JL617319	0.71
RNA binding motif protein 8A	NM_001163973	0.71
RAS (RAD and GEM)-like GTP-binding 1	XM_001499538	0.72
ribonuclease P/MRP 40kDa subunit	XM_001489514	0.74
tRNA-splicing ligase RtcB homolog	NM_001286858	0.72
Gene Name	GenBank ID	R²
SKI2 homolog, superkiller viralicidic activity 2-like	JL619293	0.72
small nuclear RNA activating complex polypeptide 5	XM_005602979	0.71
small nuclear ribonucleoprotein polypeptide A	CX596583	0.73
small nuclear ribonucleoprotein D1 polypeptide 16kDa	DN507832	0.71
small nuclear ribonucleoprotein D3 polypeptide 18kDa	DN508752	0.70
small nuclear ribonucleoprotein polypeptide G	CX598844	0.70
transcriptional adaptor 2B	XM_001499994	0.71
translocase of outer mitochondrial membrane 6 homolog (yeast)	CX594733	0.70
tripeptidyl peptidase II	HQ890213	0.72
tyrosylprotein sulfotransferase 1	JL618692	0.71
tRNA methyltransferase 6 homolog (<i>S. cerevisiae</i>)	JL619366	0.71
ubiquitin-conjugating enzyme E2 L3-like	-	0.73
UTP15, U3 small nucleolar ribonucleoprotein, homolog (<i>S. cerevisiae</i>)	JL637135	0.72
vitamin K epoxide reductase complex, subunit 1-like 1	CX600554	0.71
-	DN505710	0.70
-	CX602993	0.71
-	CX603573	0.71
-	DN508711	0.73
-	DN509404	0.70
-	JL637397	0.70
-	JL638041	0.73
-	-	0.74
-	-	0.72

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2.13E-08

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1.91E-09

For Review Only

Probe ID	Gene Symbol
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A_69_P102586	<i>ABCA1</i>
A_69_P000541	<i>ABCC1</i>
A_69_P055721	<i>ABHD14A</i>
A_69_P100371	<i>ABHD4</i>
A_69_P061921	<i>ABLIM3</i>
A_69_P111793	<i>ADAMTS</i>
A_69_P083426	<i>ADAMTS3</i>
A_69_P016011	<i>AGA</i>
A_69_P001441	<i>AGL</i>
A_69_P017016	<i>AIRE</i>
A_69_P026922	<i>AK3</i>
A_69_P028551	<i>ANKRD55</i>
A_69_P046651	<i>APOE</i>
A_69_P005211	<i>AQP5</i>
A_69_P084151	<i>ARAP2</i>
A_69_P129016	<i>ARHGAP26</i>
A_69_P101218	<i>ATL1</i>
A_69_P003236	<i>ATP1B1</i>
A_69_P085571	<i>ATP6V0B</i>
A_69_P116831	<i>ATP6V1G1</i>
A_69_P074555	<i>B4GALT3</i>
A_69_P025736	<i>B4GALT5</i>
A_69_P066411	<i>B4GALT6</i>
A_69_P013211	<i>BAAT</i>
A_69_P085227	<i>BEND5</i>
A_69_P017269	<i>BRI3</i>
A_69_P020628	<i>BTG1</i>
A_69_P063192	<i>C14H5orf30</i>
A_69_P078796	<i>C1GALT1</i>
A_69_P094526	<i>C1H10orf32</i>
A_69_P110496	<i>CACNG4</i>
A_69_P008386	<i>CAPN2</i>
A_69_P118898	<i>CCL28</i>
A_69_P077771	<i>CD36</i>
A_69_P011631	<i>CD81</i>
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A_69_P049612	<i>CEP85L</i>
A_69_P008186	<i>CHML</i>
A_69_P017468	<i>CHST12</i>
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A_69_P082376	<i>CRISPLD2</i>
A_69_P117166	<i>CRTAP</i>
A_69_P039722	<i>CRYL1</i>
A_69_P011186	<i>CST6</i>
A_69_P035266	<i>CTNS</i>
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A_69_P007081	<i>CTSD</i>
A_69_P026431	<i>CTSL1</i>
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A_69_P006602	<i>CYP19A1</i>
A_69_P111371	<i>CYP20A1</i>
A_69_P060376	<i>DNMT3A</i>
A_69_P066371	<i>DSC2</i>
A_69_P066401	<i>DSG2</i>
A_69_P036586	<i>DSP</i>
A_69_P040306	<i>EBPL</i>
A_69_P045941	<i>ECH1</i>
A_69_P075386	<i>EFNA4</i>
A_69_P102637	<i>EPAS1</i>
A_69_P087727	<i>ERRFI1</i>
A_69_P010503	<i>FADS1</i>
A_69_P010510	<i>FADS2</i>
A_69_P076821	<i>FAM102B</i>
A_69_P080476	<i>FAM115A</i>
A_69_P012777	<i>FAM214B</i>
A_69_P106751	<i>FARP1</i>
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A_69_P021861	<i>FBLN1</i>
A_69_P098526	<i>FBN1</i>
A_69_P077821	<i>FGL2</i>
A_69_P079257	<i>FKBP14</i>
A_69_P073551	<i>FMO1</i>
A_69_P071331	<i>FOLR1</i>
A_69_P071326	<i>FOLR2</i>
A_69_P030646	<i>FSTL1</i>
A_69_P002146	<i>FTH1</i>
A_69_P123036	<i>FUT6</i>
A_69_P065746	<i>FZD10</i>
A_69_P032736	<i>FZD2</i>
A_69_P061721	<i>GALNT10</i>
A_69_P026131	<i>GATA5</i>
A_69_P018235	<i>GATSL2</i>
A_69_P069816	<i>GCDH</i>
A_69_P108442	<i>GCSH</i>
A_69_P076277	<i>GDAP2</i>
A_69_P013791	<i>GGTA1</i>
A_69_P126796	<i>GHR</i>
A_69_P092021	<i>GLA</i>
A_69_P098442	<i>GLDN</i>
A_69_P062066	<i>GNPDA1</i>
A_69_P029556	<i>GOLIM4</i>
A_69_P096197	<i>GPR137B</i>
A_69_P032136	<i>GPRC5C</i>
A_69_P000651	<i>GPX3</i>
A_69_P067206	<i>GRHPR</i>
A_69_P127146	<i>GSTA1</i>

A_69_P039406	<i>GSTA3</i>
A_69_P021106	<i>HMOX1</i>
A_69_P019556	<i>HMOX2</i>
A_69_P033686	<i>HOXB6</i>
A_69_P103031	<i>HS2ST1</i>
A_69_P098106	<i>IGDCC3</i>
A_69_P016581	<i>IL10RB</i>
A_69_P004371	<i>IL1RAP</i>
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A_69_P089211	<i>INPP4B</i>
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A_69_P050566	<i>IRS1</i>
A_69_P074076	<i>IVNS1ABP</i>
A_69_P044762	<i>KHDRBS3</i>
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A_69_P044481	<i>MAL2</i>
A_69_P068036	<i>MAML2</i>
A_69_P113746	<i>MAN2B2</i>
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A_69_P067851	<i>MCOLN1</i>
A_69_P124666	<i>MDK</i>
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A_69_P073781	<i>MFSD1</i>
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A_69_P031766	<i>MFSD11</i>
A_69_P045146	<i>MFSD3</i>
A_69_P002807	<i>MITF</i>
A_69_P081401	<i>MMP15</i>
A_69_P092191	<i>MORF4L2</i>
A_69_P112309	<i>MRPS36</i>
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A_69_P046116	<i>PLD3</i>
A_69_P074321	<i>PLXNA2</i>
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A_69_P096058	<i>RASSF4</i>
A_69_P054206	<i>RDH16</i>
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A_69_P007391	<i>RTN4R</i>
A_69_P107096	<i>SAR1A</i>
A_69_P104312	<i>SATB1</i>
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A_69_P020781	<i>SLC25A3</i>
A_69_P062821	<i>SLC27A6</i>
A_69_P051781	<i>SLC2A3</i>
A_69_P013571	<i>SLC31A2</i>
A_69_P059722	<i>SLC3A1</i>
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A_69_P093436	<i>SLC6A8</i>
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A_69_P084276	<i>SLIT2</i>
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A_69_P034846	<i>TP53I13</i>
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A_69_P080607	<i>TPK1</i>
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A_69_P052953	<i>TUBA1A</i>
A_69_P074456	<i>UAP1</i>
A_69_P015056	<i>UAP1L1</i>
A_69_P007626	<i>UNC93A</i>
A_69_P068451	<i>USP28</i>

A_69_P007946	<i>UST</i>
A_69_P005163	<i>VEGFA</i>
A_69_P110011	<i>VEGFB</i>
A_69_P104698	<i>WDR83OS</i>
A_69_P041906	<i>WDSUB1</i>
A_69_P077581	<i>WLS</i>
A_69_P045356	<i>WTIP</i>
A_69_P089972	<i>WWC3</i>
A_69_P015836	<i>ZFP42</i>
A_69_P044556	<i>ZHX1</i>
A_69_P063967	<i>ZNF74</i>
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A_69_P109149	unnamed
A_69_P109531	unnamed
A_69_P107879	unnamed
A_69_P106156	unnamed
A_69_P109181	unnamed
A_69_P102747	unnamed
A_69_P110756	unnamed
A_69_P110802	unnamed
Probe ID	Gene Symbol
A_69_P069896	unnamed
A_69_P110876	unnamed
A_69_P108336	unnamed
A_69_P111451	unnamed
A_69_P105696	unnamed
A_69_P105786	unnamed
A_69_P112331	unnamed
A_69_P112416	unnamed
A_69_P117121	unnamed
A_69_P113057	unnamed
A_69_P113141	unnamed
A_69_P113376	unnamed
A_69_P113386	unnamed
A_69_P113520	unnamed
A_69_P113546	unnamed
A_69_P114056	unnamed
A_69_P114266	unnamed
A_69_P114452	unnamed
A_69_P114686	unnamed
A_69_P114697	unnamed

A_69_P113251	unnamed
A_69_P105692	unnamed
A_69_P107932	unnamed
A_69_P103491	unnamed
A_69_P102136	unnamed
A_69_P009018	unnamed
A_69_P105646	unnamed
A_69_P111707	unnamed
A_69_P080071	unnamed
A_69_P050341	unnamed
A_69_P069821	unnamed
A_69_P066166	unnamed
A_69_P066171	unnamed
A_69_P115731	unnamed
A_69_P127081	unnamed
A_69_P105591	unnamed
A_69_P111706	unnamed
A_69_P116886	unnamed
A_69_P108981	unnamed
A_69_P121376	unnamed
A_69_P127082	unnamed

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Gene Name	GenBank ID
4-Aminobutyrate aminotransferase	XM_001492974
ATP-binding cassette, sub-family A (ABC1), member 1	XM_001493790
ATP-binding cassette, sub-family C (CFTR/MRP), member 1	NM_001081763
abhydrolase domain containing 14A	XM_005600596
abhydrolase domain containing 4	XM_005603212
Actin-binding LIM protein 3	XM_005599308
ADAM metallopeptidase with thrombospondin type 1 motif	CX605349
ADAM metallopeptidase with thrombospondin type 1 motif, 3	XM_001488411
aspartylglucosaminidase	JL639870
amylo-alpha-1, 6-glucosidase, 4-alpha-gluconotransferase	NM_001110308
autoimmune regulator	XM_001490497
adenylate kinase 3	JL616262
ankyrin repeat domain 55	CD471805
apolipoprotein E	DN508442
aquaporin 5	AJ555456
ArfGAP with RhoGAP domain, ankyrin repeat and PH domain 2	XM_001498922
Rho GTPase activating protein 26	XM_005599700
atlastin GTPase 1	JL638674
ATPase, Na ⁺ /K ⁺ transporting, beta 1 polypeptide	AJ539224
ATPase, H ⁺ transporting, lysosomal 21kDa, V0 subunit b	XM_001915981
ATPase, H ⁺ Transporting, Lysosomal 13kDa, V1 Subunit G1	JL616764
UDP-Gal:betaGlcNAc beta 1,4- galactosyltransferase, polypeptide 3	XM_005609880
UDP-Gal:betaGlcNAc beta 1,4- galactosyltransferase, polypeptide 5	XM_005604704
UDP-Gal:betaGlcNAc beta 1,4- galactosyltransferase, polypeptide 6	XM_001495247
bile acid CoA: amino acid N-acyltransferase (glycine N-choloyltransferase)	XM_001504021
BEN domain containing 5	BI961467
brain protein I3	XM_005598521
B-cell translocation gene 1, anti-proliferative	HQ890190
chromosome 14 open reading frame, human C5orf30	
core 1 Synthase, Glycoprotein-N-Acetylglactosamine 3-Beta-Galactosyltransferase 1	XM_005615243
chromosome 1 open reading frame, human C10orf32	JL641604
calcium Channel, Voltage-Dependent, Gamma Subunit 4	CX602892
calpain 2, (m/II) large subunit	JL620783
chemokine (C-C motif) ligand 28	XM_005604289
CD36 molecule (thrombospondin receptor)	DN625967
CD81 protein-like	XM_001492723
CDP-diacylglycerol synthase (phosphatidate cytidyltransferase) 2	JL640026
centrosomal protein 85kDa-like	XM_005596902
choroideremia-like (Rab escort protein 2)	NM_001256975
carbohydrate (chondroitin 4) sulfotransferase 12	CX605574
coilin	JL641536
colorectal Cancer Associated 2	XM_005611555
collectin sub-family member 12	CX599105
cysteine-rich secretory protein LCCL domain containing 2	XM_001499908
Cartilage associated protein	CX601311
Crystallin, Lambda 1	JL619521
cystatin E/M	DN510344
cystinosin, lysosomal cystine transporter	XM_001504726
cathepsin A	JL616519

cathepsin D	XM_005613565
cathepsin L1-like	JL638073
cytochrome P-450 17 alpha-hydroxylase/C17,20-lyase	NM_001082523
cytochrome P450, family 19, subfamily A, polypeptide 1	NM_001081805
cytochrome P450 20A1-like	XM_001917986
DNA (cytosine-5-)-methyltransferase 3 alpha	JL620377
desmocollin 2	XM_005612816
desmoglein 2	XM_005612929
desmoplakin	XM_005604024
emopamil binding protein-like	XM_003363222
enoyl CoA hydratase 1, peroxisomal	CX604762
ephrin-A4	XM_001494541
endothelial PAS domain protein 1	XM_005600005
ERBB receptor feedback inhibitor 1	CX600651
fatty acid desaturase 1	XM_005598429
fatty acid desaturase 2	XM_001494183
family with sequence similarity 102, member B	JL628650
family with sequence similarity 115, member A	XM_005609471
family with sequence similarity 115, member B	-
FERM, RhoGEF (ARHGEF) And Pleckstrin Domain Protein 1 (Chondrocyte-Derived)	CX605827
Gene Name	GenBank ID
fibulin 1	XM_005606817
fibrillin 1	XM_001502259
fibrinogen-like 2	JL620874
FK506 binding protein 14, 22 kDa	CX599158
flavin containing monooxygenase 1	XM_005609652
folate receptor 1 (adult)	XM_005612057
folate receptor 2 (fetal)	CX603148
follistatin-like 1	XM_001500510
ferritin, heavy polypeptide 1	NM_001252054
alpha-(1,3)-fucosyltransferase-like	XM_005596837
frizzled family receptor 10	XM_001504870
frizzled family receptor 2	XM_005614747
UDP-N-acetyl-alpha-D-galactosamine:polypeptide N-acetylgalactosaminyltransferase 10	XM_001501156
GATA binding protein 5	XM_001915025
GATS protein-like 2	XM_001494413
glutaryl-CoA dehydrogenase	XM_005611849
glycine cleavage system protein H (aminomethyl carrier)	JL638841
ganglioside induced differentiation associated protein 2	JL620296
N-acetyllactosaminide alpha-1,3-galactosyltransferase-like	XM_005605755
growth hormone receptor	XM_001498656
galactosidase, alpha	JL621313
gliomedin	XM_005614707
glucosamine-6-phosphate deaminase 1	XM_001503958
golgi integral membrane protein 4	XM_001494089
G protein-coupled receptor 137B	JL635976
G protein-coupled receptor, family C, group 5, member C	XM_001916896
glutathione peroxidase 3 (plasma)	NM_001115158
glyoxylate reductase/hydroxypyruvate reductase-like	JL624154
glutathione S-transferase A1-like	XM_001498703

glutathione S-transferase alpha 3	XM_003363724
heme oxygenase (decycling) 1	XM_005606579
heme oxygenase (decycling) 2	CX598108
homeobox B6	XM_003362395
heparan sulfate 2-O-sulfotransferase 1	XM_005610449
immunoglobulin superfamily, DCC subclass, member 3	XM_005603327
interleukin 10 receptor, beta	JL638183
interleukin-1 receptor accessory protein	AY246804
interleukin 6 signal transducer (gp130, oncostatin M receptor)	HQ890303
inositol polyphosphate-4-phosphatase, type II, 105kDa	JL621707
IQ motif containing GTPase activating protein 2	JL640147
insulin receptor substrate 1	XM_001915475
influenza virus NS1A binding protein	JL637396
KH domain containing, RNA binding, signal transduction associated 3	-
KIAA1522 ortholog	XM_001499821
Kruppel-like factor 15	XM_001492994
lysine-rich coiled-coil 1	CD528158
kinase suppressor of Ras 1	XM_005597599
laminin alpha 1	XM_005612914
lysosomal protein transmembrane 4 beta	JL629785
legumain	XM_001497437
lysophosphatidic acid receptor 1	XM_005605701
lysophosphatidylglycerol acyltransferase 1	JL616401
latrophilin 3	-
leucine rich repeat and fibronectin type III domain containing 3	XM_001916010
low density lipoprotein receptor-related protein 2	XM_005601570
leucine rich repeat containing 3B	XM_005600890
latent transforming growth factor beta binding protein 1	XM_003363006
leucine rich adaptor protein 1-like	XM_001494571
melanoma-associated antigen E2-like	XM_005614284
mal, T-cell differentiation protein 2	XM_001496457
mastermind-like 2 (Drosophila)	XM_001497899
mannosidase, alpha, class 2B, member 2	DN509057
microtubule-associated protein 1 light chain 3 beta	JL617449
mitochondrial amidoxime reducing component 1	XM_001488996
mucolipin 1	XM_001916944
midkine (neurite growth-promoting factor 2)	XM_005598122
meteorin, glial cell differentiation regulator-like	XM_005597009
malignant fibrous histiocytoma amplified sequence 1	XM_001494597
major facilitator superfamily domain containing 1	JL616844
Gene Name	GenBank ID
major facilitator superfamily domain containing 11	XM_001492704
major facilitator superfamily domain containing 3	XM_001495501
microphthalmia-associated transcription factor	NM_001163874
matrix metalloproteinase 15	XM_001494296
mortality factor 4 like 2	HQ890186
mitochondrial ribosomal protein S36	JL615854
microtubule-associated tumor suppressor candidate 2-like	XM_001915179
matrix-remodelling associated 5	XM_001500228
matrix-remodelling associated 7	XM_005597884

myosin regulatory light chain interacting protein	CD465538
N-acetylglucosaminidase, alpha	XM_001917361
NCK associated protein 5 like	XM_005611151
neural precursor cell expressed, developmentally down-regulated 9	JL620287
sialidase 2 (cytosolic sialidase)	XM_001499122
nipsnap homolog 3A (C. elegans)	JL621454
Niemann-Pick disease, type C2	CX602052
neuropeptide Y receptor Y5	NM_001257126
nuclear receptor subfamily 3, group C, member 2	XM_001501662
neurotrophin 3	XM_001495245
oligonucleotide/oligosaccharide-binding fold containing 1	CX599352
oxoglutarate dehydrogenase-like	XM_001500169
protein kinase C and casein kinase substrate in neurons 3	XM_001490695
polyadenylate-binding protein-interacting protein 1	JL616561
platelet derived growth factor C	XM_005607800
PDZ domain containing 2	XM_001500670
peptidase D	DN508829
peroxisomal biogenesis factor 11 alpha	DN506912
progesterone receptor membrane component 1	JL618515
phospholipase A2, group X	XM_001489049
phospholipase D family, member 3	CX605811
plexin A2	XM_001491448
protein O-linked mannose N-acetylglucosaminyltransferase 1 (beta 1,2-)	CX599967
P450 (cytochrome) oxidoreductase	NM_001122655
peroxisome proliferator-activated receptor gamma, coactivator 1 alpha	XM_001499929
palmitoyl-protein thioesterase 1	XM_001503336
protein kinase C, alpha	XM_005597899
protein S (alpha)	CX597937
prostaglandin E synthase	NM_001081935
protein tyrosine phosphatase-like A domain containing 2	XM_001495346
protein tyrosine phosphatase, receptor type, J	JL631676
RAN binding protein 3-like	JL629257
retinoic acid receptor responder (tazarotene induced) 1	CX603702
Ras association (RalGDS/AF-6) domain family member 4	NM_001242540
retinol dehydrogenase 16-like	BM780432
regulator of G-protein signaling 17	XM_001501571
Rho-related BTB domain containing 3	JL631440
ring finger protein 11	JL617191
ring finger protein 149	JL619533
ribonuclease/angiogenin inhibitor 1	XM_001488475
Ras-related GTP binding D	XM_001500697
reticulon 4 receptor	XM_001488073
SAR1 homolog A (S. cerevisiae)	JL616687
SATB homeobox 1	JL619056
SATB homeobox 2	-
SAYSVFN motif domain containing 1	XM_001500605
serine carboxypeptidase 1	DN510840
syndecan binding protein (syntenin)	JL639909
sema domain, immunoglobulin domain (Ig), short basic domain, secreted, (semaphorin) 3E	XM_001491062
septin 6	XM_005614472

serine incorporator 1	CX604518
serum/glucocorticoid regulated kinase 1	JL639802
SIK family kinase 3	CX593738
solute carrier family 13 (sodium/sulfate symporter), member 4	XM_005609430
solute carrier family 25 (mitochondrial carrier; phosphate carrier), member 3	JL616174
solute carrier family 27 (fatty acid transporter), member 6	XM_001504475
solute carrier family 2 (facilitated glucose transporter), member 3	JL632303
solute carrier family 31 (copper transporter), member 2	XM_001488681
solute carrier family 3 (amino acid transporter heavy chain), member 1	XM_005600007
Gene Name	GenBank ID
solute carrier family 3 (amino acid transporter heavy chain), member 2	XM_001495061
solute carrier family 6 (neurotransmitter transporter), member 8	XM_005614624
solute carrier family 9, subfamily A (NHE2, cation proton antiporter 2), member 2	NM_001163960
solute carrier organic anion transporter family, member 2A1	XM_005601058
solute carrier organic anion transporter family, member 2B1	NM_001081789
slit homolog 2 (Drosophila)	XM_005608847
SMAD family member 1	NM_001163882
single-pass membrane protein with coiled-coil domains 3	XM_001501745
smoothed, frizzled family receptor	AY177142
sphingomyelin phosphodiesterase 1, acid lysosomal	XM_001918061
sphingomyelin phosphodiesterase 3, neutral membrane	XM_005615221
sperm-associated antigen 1	JL638362
Spectrin beta chain, brain 1	XM_001497029
sperm specific antigen 2	JL621771
secreted seminal-vesicle Ly-6 protein 1-like	DN508873
suppression of tumorigenicity 13 (colon carcinoma) (Hsp70 interacting protein)	JL616190
signal-transducing adaptor protein 2	XM_005615085
six transmembrane epithelial antigen of the prostate 1	XM_001492557
sulfatase modifying factor 2	JL623820
TBC1 domain family, member 8 (with GRAM domain)	JL637774
thyroid hormone receptor, alpha	XM_001500629
transducin like enhancer of split 2	XM_001916205
toll-like receptor 3	NM_001081798
transmembrane protein 106C	JL616159
transmembrane protein 139	CX594710
transmembrane protein 47-like	XM_005614174
transmembrane protein 86A	XM_001504973
transmembrane protein with metallophosphoesterase domain	JL626148
tumor necrosis factor receptor superfamily, member 19	XM_005601097
trinucleotide repeat containing 6C	XM_003362463
tensin 3	XM_005609127
tumor protein p53 inducible protein 13	XM_005597958
trophoblast glycoprotein	XM_005614819
thiamin pyrophosphokinase 1	XM_005609478
TSC22 domain family, member 3	CD465754
tubulin alpha-1A chain-like	XM_001504174
UDP-N-acetylglucosamine pyrophosphorylase 1	CX603465
UDP-N-acetylglucosamine pyrophosphorylase 1-like 1	XM_005606061
unc-93 homolog A (C. elegans)	XM_001499947
ubiquitin specific peptidase 28	JL621413

uronyl-2-sulfotransferase	XM_005608224
vascular endothelial growth factor A	NM_001081821
vascular endothelial growth factor B	CX601881
WD repeat domain 83 opposite strand	CD471464
WD repeat, sterile alpha motif and U-box domain containing 1	XM_005601512
wntless homolog (Drosophila)	XM_005610504
Wilms tumor 1 interacting protein	XM_005596132
WWC family member 3	XM_001487928
ZFP42 zinc finger protein	XM_001489519
zinc fingers and homeoboxes 1	JL616798
zinc finger protein 74	XM_005612337
-	CD470337
-	CD470622
-	CD470892
-	CX592434
-	CX595223
-	CX595878
-	CX596102
-	CX596760
-	CX596917
-	CX598039
-	CX599594
-	CX600981
-	CX602031
-	CX602612
-	CX602902
-	CX603163
-	CX603353
-	CX603540
Gene Name	GenBank ID
-	CD535582
-	CX603696
-	CX604190
-	CX604657
-	CX605310
-	CX605698
-	DN504741
-	DN505188
-	DN505917
-	DN507511
-	DN508159
-	DN508418
-	DN508420
-	DN508694
-	DN508719
-	DN509646
-	DN510044
-	DN510351
-	DN510776
-	DN510820

-	DN510935
-	JL617400
-	JL619481
-	JL621923
-	JL628163
-	JL628524
-	JL632518
-	JL637340
-	XM_005609503
-	XM_005610785
-	XM_005611850
-	XM_005612768
-	XM_005612769
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-	-
-	-

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R²	p-value
0.75	3.52E-11
0.71	4.94E-10
0.78	2.15E-11
0.77	6.61E-12
0.70	6.86E-10
0.71	3.20E-10
0.70	5.87E-10
0.74	4.46E-10
0.80	5.15E-12
0.74	6.80E-11
0.73	6.50E-10
0.74	7.20E-11
0.74	6.05E-11
0.77	7.25E-12
0.77	7.02E-12
0.72	2.00E-10
0.75	3.54E-11
0.70	5.82E-10
0.79	1.28E-12
0.71	3.31E-10
0.78	2.98E-12
0.71	3.37E-10
0.74	6.16E-11
0.81	3.00E-12
0.77	8.91E-12
0.72	2.24E-10
0.73	1.07E-10
0.72	1.42E-09
0.72	1.35E-09
0.71	4.15E-10
0.73	1.35E-10
0.77	4.21E-11
0.80	7.58E-13
0.79	1.03E-12
0.75	3.21E-11
0.70	7.07E-10
0.74	6.53E-11
0.72	1.65E-10
0.74	4.24E-11
0.78	2.26E-12
0.71	3.44E-10
0.76	2.01E-11
0.73	8.47E-11
0.78	3.66E-11
0.79	1.04E-11
0.81	2.88E-13
0.75	3.44E-11
0.78	3.03E-11
0.75	3.43E-11

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0.76	1.14E-11
0.78	2.65E-12
0.76	1.29E-11
0.76	1.99E-11
0.70	6.59E-10
0.73	1.22E-10
0.71	4.91E-10
0.75	2.90E-11
0.73	9.62E-11
0.72	1.90E-10
0.71	3.81E-10
0.77	7.05E-12
0.77	8.28E-11
0.71	3.04E-09
0.71	3.14E-10
0.75	2.28E-11
0.80	4.68E-13
0.78	2.41E-12
0.75	3.25E-10
0.73	9.21E-11
R²	p-value
0.75	3.33E-11
0.71	3.05E-10
0.73	8.34E-12
0.70	6.39E-10
0.76	1.57E-11
0.70	6.36E-10
0.70	6.67E-10
0.72	1.64E-10
0.72	1.87E-10
0.70	6.52E-10
0.70	6.40E-10
0.72	2.21E-10
0.74	6.35E-11
0.75	2.04E-11
0.72	2.36E-10
0.72	1.80E-10
0.78	3.19E-12
0.76	1.89E-11
0.76	1.97E-11
0.71	4.79E-10
0.72	1.62E-10
0.73	1.40E-10
0.74	4.91E-11
0.77	4.65E-12
0.77	8.13E-12
0.76	1.11E-11
0.76	1.46E-11
0.72	2.82E-10
0.76	1.42E-11

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0.75	2.76E-11
0.75	3.86E-11
0.76	1.75E-11
0.76	1.74E-11
0.74	4.72E-11
0.72	2.52E-10
0.78	3.96E-12
0.70	5.65E-10
0.72	2.28E-10
0.72	1.57E-10
0.72	2.51E-10
0.74	5.45E-11
0.79	1.81E-12
0.73	1.14E-10
0.72	1.33E-09
0.71	4.22E-11
0.75	3.33E-11
0.71	4.28E-10
0.70	6.86E-10
0.71	4.07E-10
0.75	2.11E-11
0.83	4.55E-13
0.75	3.99E-11
0.73	8.46E-11
0.72	2.35E-10
0.73	1.49E-10
0.71	4.83E-10
0.70	5.76E-10
0.78	3.68E-12
0.71	4.56E-10
0.74	6.95E-11
0.70	6.06E-10
0.79	1.79E-12
0.76	1.58E-11
0.74	3.92E-10
0.71	3.88E-10
0.78	2.73E-12
0.73	6.41E-09
0.71	4.95E-10
0.70	6.20E-10
R²	p-value
0.76	1.39E-11
0.75	3.42E-11
0.77	5.74E-12
0.72	2.82E-10
0.77	5.91E-12
0.75	3.15E-10
0.81	1.94E-12
0.71	3.78E-10
0.72	1.61E-09

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0.77	6.22E-12
0.71	4.01E-10
0.79	1.07E-12
0.74	6.25E-11
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0.75	3.54E-11
0.71	3.36E-10
0.74	5.36E-11
0.76	1.42E-11
0.75	2.14E-10
0.70	6.30E-10
0.70	5.42E-10
0.71	3.56E-10
0.73	1.09E-10
0.80	8.24E-12
0.75	3.34E-11
0.75	2.48E-11
0.72	1.88E-10
0.76	1.03E-11
0.72	2.65E-10
0.72	2.70E-10
0.77	5.77E-12
0.75	3.75E-11
0.74	7.54E-11
0.78	3.54E-12
0.75	2.18E-11
0.78	2.41E-11
0.73	1.34E-10
0.74	4.70E-10
0.73	6.77E-10
0.74	5.92E-11
0.73	1.10E-10
0.76	1.62E-11
0.72	2.67E-10
0.73	8.97E-11
0.78	4.10E-12
0.77	7.48E-12
0.70	4.89E-11
0.72	1.86E-09
0.71	4.40E-10
0.76	1.09E-11
0.70	5.16E-11
0.72	1.74E-10
0.74	6.88E-11
0.80	4.76E-12
0.72	2.13E-10
0.80	6.61E-13
0.75	2.81E-11
0.76	1.20E-11
0.79	8.76E-12

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0.71	3.17E-10
0.73	1.15E-10
0.75	2.83E-11
0.75	3.33E-11
0.74	5.81E-11
0.78	3.70E-12
0.75	2.83E-11
0.76	1.83E-11
0.71	4.18E-11
R²	p-value
0.72	1.69E-10
0.75	3.65E-11
0.73	1.24E-10
0.71	4.83E-10
0.74	7.35E-11
0.73	9.38E-11
0.71	3.13E-10
0.72	2.23E-11
0.72	1.93E-10
0.78	3.68E-11
0.71	3.29E-10
0.75	1.55E-09
0.78	3.20E-12
0.70	4.85E-09
0.74	6.98E-11
0.78	3.49E-12
0.76	1.46E-10
0.81	1.63E-11
0.70	4.32E-09
0.71	3.83E-10
0.76	1.41E-11
0.74	4.74E-11
0.72	1.89E-10
0.75	2.86E-10
0.77	8.85E-12
0.77	6.80E-12
0.73	1.01E-09
0.76	1.33E-11
0.77	6.55E-11
0.71	2.92E-10
0.73	4.69E-09
0.71	3.11E-10
0.71	4.64E-10
0.74	5.67E-11
0.73	1.19E-11
0.73	9.44E-10
0.71	5.11E-10
0.71	3.93E-10
0.71	3.52E-10
0.77	9.77E-12

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0.72	2.04E-09
0.72	2.52E-10
0.75	3.31E-11
0.71	4.25E-10
0.76	2.04E-11
0.71	4.03E-10
0.72	2.40E-10
0.80	8.51E-13
0.73	1.31E-10
0.76	1.27E-11
0.72	1.73E-10
0.76	1.91E-11
0.72	1.80E-09
0.74	5.84E-11
0.79	1.58E-11
0.79	1.82E-12
0.79	1.43E-12
0.75	2.71E-11
0.76	1.34E-11
0.81	2.17E-12
0.76	8.99E-10
0.74	6.73E-11
0.78	3.34E-12
0.72	1.66E-11
0.73	1.46E-10
0.77	6.09E-12
0.73	1.13E-10
0.71	3.75E-10
0.76	1.47E-11
R²	p-value
0.77	6.78E-12
0.77	9.49E-12
0.77	6.69E-12
0.77	7.53E-12
0.77	5.00E-12
0.80	7.78E-13
0.73	1.16E-10
0.75	2.98E-11
0.72	1.58E-10
0.71	4.16E-10
0.75	4.09E-11
0.81	3.32E-13
0.75	2.51E-11
0.72	1.60E-10
0.74	4.66E-11
0.75	2.88E-11
0.71	3.17E-09
0.72	2.43E-10
0.80	3.99E-13
0.70	5.13E-09

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0.75	4.02E-11
0.71	4.58E-10
0.76	1.42E-11
0.72	1.87E-10
0.71	1.94E-08
0.71	4.49E-10
0.70	4.79E-11
0.79	1.82E-12
0.71	4.77E-10
0.74	4.62E-11
0.77	5.82E-12
0.75	2.19E-11
0.75	2.55E-11
0.72	2.33E-10
0.77	4.60E-12
0.81	2.53E-12
0.80	8.59E-13
0.71	3.52E-10
0.77	7.57E-12
0.75	1.76E-10
0.73	8.15E-11

For Review Only

Probe ID	Gene Symbol
A 69 P018151	<i>ABHD11</i>
A 69 P096022	<i>ACTA1</i>
A 69 P001116	<i>ACTB</i>
A 69 P017556	<i>ADAP1</i>
A 69 P109677	<i>AGPAT1</i>
A 69 P023051	<i>AHSA1</i>
A 69 P072537	<i>AKIP1</i>
A 69 P085932	<i>AKIRIN1</i>
A 69 P094992	<i>ALDH18A1</i>
A 69 P096556	<i>ANXA8</i>
A 69 P070212	<i>AP1M2</i>
A 69 P005420	<i>ARG2</i>
A 69 P004939	<i>ARP3</i>
A 69 P107456	<i>ASB3</i>
A 69 P064676	<i>ASCC2</i>
A 69 P038236	<i>ATF6B</i>
A 69 P114456	<i>ATG4C</i>
A 69 P044286	<i>AZIN1</i>
A 69 P100911	<i>BAZ1A</i>
A 69 P120396	<i>BZW1</i>
A 69 P031516	<i>C11H17orf70</i>
A 69 P101261	<i>C1H14orf166</i>
A 69 P072751	<i>C7H11orf58</i>
A 69 P050666	<i>CAB39</i>
A 69 P060236	<i>CAD</i>
A 69 P085861	<i>CAP1</i>
A 69 P008961	<i>CAPRIN1</i>
A 69 P011666	<i>CARS</i>
A 69 P094306	<i>CASP7</i>
A 69 P081561	<i>CBFB</i>
A 69 P079137	<i>CBX3</i>
A 69 P056276	<i>CCDC12</i>
A 69 P045226	<i>CCNE1</i>
A 69 P087066	<i>CDC42</i>
A 69 P075886	<i>CDC42SE1</i>
A 69 P056406	<i>CDCP1</i>
A 69 P052073	<i>CDKN1B</i>
A 69 P036531	<i>CDYL</i>
A 69 P051226	<i>CECR5</i>
A 69 P083621	<i>CENPC</i>
A 69 P030321	<i>CEP19</i>
A 69 P088641	<i>CEP44</i>
A 69 P064766	<i>CHEK2</i>
A 69 P055006	<i>CIDEC</i>
A 69 P056826	<i>CLASP2</i>
A 69 P019746	<i>CLDN6</i>
A 69 P038142	<i>CLIC1</i>
A 69 P046331	<i>CNFN</i>
A 69 P083101	<i>COQ2</i>

A 69 P011391	<i>CORO1B</i>
A 69 P103437	<i>COTL1</i>
A 69 P023276	<i>CPSF2</i>
A 69 P043121	<i>CREB1</i>
A 69 P075496	<i>CREB3L4</i>
A 69 P038100	<i>CSNK2B</i>
A 69 P008761	<i>CSRP1</i>
A 69 P030568	<i>CSTA</i>
A 69 P125966	<i>CTDSPL2</i>
A 69 P025196	<i>CTNNBL1</i>
A 69 P009941	<i>CTNND1</i>
A 69 P085801	<i>CTPS1</i>
A 69 P072621	<i>CTR9</i>
A 69 P076496	<i>CTTNBP2NL</i>
A 69 P033521	<i>CWC25</i>
A 69 P078186	<i>DBNL</i>
A 69 P083452	<i>DCK</i>
A 69 P063071	<i>DCP2</i>
A 69 P082059	<i>DDX19A</i>
A 69 P082061	<i>DDX19B</i>
Probe ID	Gene Symbol
A 69 P061106	<i>DDX41</i>
A 69 P034352	<i>DDX52</i>
A 69 P052496	<i>DENND5B</i>
A 69 P008121	<i>DESI2</i>
A 69 P057736	<i>DHX36</i>
A 69 P081926	<i>DHX38</i>
A 69 P098991	<i>DNAJC17</i>
A 69 P062396	<i>DNAJC18</i>
A 69 P103781	<i>DPF2</i>
A 69 P099152	<i>DPH6</i>
A 69 P067606	<i>DPP9</i>
A 69 P045257	<i>DPY19L3</i>
A 69 P024121	<i>DSTN</i>
A 69 P038211	<i>DXO</i>
A 69 P024901	<i>E2F1</i>
A 69 P086991	<i>E2F2</i>
A 69 P081602	<i>E2F4</i>
A 69 P015181	<i>EHMT1</i>
A 69 P018761	<i>EIF3C</i>
A 69 P092831	<i>ELF4</i>
A 69 P073056	<i>ELP4</i>
A 69 P105045	<i>EMD</i>
A 69 P031651	<i>ENGASE</i>
A 69 P083146	<i>ENOPH1</i>
A 69 P055252	<i>EOGT</i>
A 69 P044046	<i>ESRP1</i>
A 69 P095111	<i>EXOC6</i>
A 69 P087596	<i>EXOSC10</i>
A 69 P097431	<i>FAH</i>

A 69 P052491	<i>FAM60A</i>
A 69 P086602	<i>FAM76A</i>
A 69 P099111	<i>FAM98B</i>
A 69 P030332	<i>FBXO45</i>
A 69 P066816	<i>FECH</i>
A 69 P022116	<i>FERMT2</i>
A 69 P045476	<i>FFAR2</i>
A 69 P032641	<i>FMNL1</i>
A 69 P022499	<i>FNTB</i>
A 69 P032791	<i>G6PC3</i>
A 69 P084821	<i>GAK</i>
A 69 P042041	<i>GALNT3</i>
A 69 P012586	<i>GD12</i>
A 69 P086196	<i>GJB3</i>
A 69 P086206	<i>GJB5</i>
A 69 P014429	<i>GLE1</i>
A 69 P113484	<i>GLTP</i>
A 69 P012916	<i>GNE</i>
A 69 P120703	<i>GNG12</i>
A 69 P040457	<i>GPALPP1</i>
A 69 P040847	<i>GPR180</i>
A 69 P061131	<i>GRK6</i>
A 69 P041182	<i>GRTP1</i>
A 69 P060206	<i>GTF3C2</i>
A 69 P091507	<i>HDAC8</i>
A 69 P107353	<i>HN1L</i>
A 69 P083096	<i>HPSE</i>
A 69 P108846	<i>HYOU1</i>
A 69 P091351	<i>IGBP1</i>
A 69 P072229	<i>ILK</i>
A 69 P004941	<i>INOS</i>
A 69 P085976	<i>INPP5B</i>
A 69 P108381	<i>INTS6</i>
A 69 P088511	<i>INTS9</i>
A 69 P070995	<i>KCTD14</i>
A 69 P027011	<i>KDM4C</i>
A 69 P008696	<i>KIF14</i>
A 69 P052576	<i>KIF21A</i>
A 69 P075254	<i>LAMTOR2</i>
A 69 P014926	<i>LHX3</i>
Probe ID	Gene Symbol
A 69 P067401	<i>LMNB2</i>
A 69 P002827	<i>LOC100034070</i>
A 69 P115896	<i>LOC100057137</i>
A 69 P125521	<i>LOC100063643</i>
A 69 P052051	<i>LOH12CR1</i>
A 69 P123107	<i>LRPPRC</i>
A 69 P077171	<i>LRRC8D</i>
A 69 P056781	<i>LRRFIP2</i>
A 69 P032797	<i>LSM12</i>

A 69 P123563	<i>LYRM9</i>
A 69 P006776	<i>MAFF</i>
A 69 P036366	<i>MAP2K3</i>
A 69 P066751	<i>MBD2</i>
A 69 P016091	<i>MCPH1</i>
A 69 P060018	<i>MEMO1</i>
A 69 P096741	<i>MESDC1</i>
A 69 P079861	<i>MEST</i>
A 69 P054621	<i>MGLL</i>
A 69 P019541	<i>MGRN1</i>
A 69 P054886	<i>MKRN2</i>
A 69 P123456	<i>MLEC</i>
A 69 P051606	<i>MLF2</i>
A 69 P027254	<i>MOB3B</i>
A 69 P066532	<i>MOCOS</i>
A 69 P097721	<i>MPI</i>
A 69 P078124	<i>MPLKIP</i>
A 69 P044511	<i>MRPL13</i>
A 69 P011011	<i>MRPL49</i>
A 69 P010591	<i>MTA2</i>
A 69 P044131	<i>MTDH</i>
A 69 P097447	<i>MTHFS</i>
A 69 P015787	<i>MTMR7</i>
A 69 P087586	<i>MTOR</i>
A 69 P085456	<i>MUTYH</i>
A 69 P085871	<i>MYCL</i>
A 69 P109027	<i>MYD88</i>
A 69 P005291	<i>MYH7</i>
A 69 P038028	<i>MZT1</i>
A 69 P066822	<i>NARS</i>
A 69 P069601	<i>NCAPD3</i>
A 69 P030301	<i>NCBP2</i>
A 69 P025676	<i>NCOA3</i>
A 69 P114781	<i>NCOA7</i>
A 69 P094291	<i>NHLRC2</i>
A 69 P081286	<i>NLRC5</i>
A 69 P104825	<i>NPAT</i>
A 69 P076376	<i>NRAS</i>
A 69 P031261	<i>NSUN3</i>
A 69 P035446	<i>NUP88</i>
A 69 P099362	<i>OR4K15</i>
A 69 P086803	<i>PAFAH2</i>
A 69 P099066	<i>PAK6</i>
A 69 P011966	<i>PARD3</i>
A 69 P080926	<i>PAXIP1</i>
A 69 P058876	<i>PCGF1</i>
A 69 P098716	<i>PDIA3</i>
A 69 P082863	<i>PDLIM5</i>
A 69 P127475	<i>PEA15</i>
A 69 P035496	<i>PFN1</i>

A 69 P007666	<i>PHF10</i>
A 69 P117386	<i>PHF20</i>
A 69 P004771	<i>PICALM</i>
A 69 P006831	<i>PIDD</i>
A 69 P038726	<i>PIM1</i>
A 69 P102884	<i>PIN4</i>
A 69 P003876	<i>PKM</i>
A 69 P089716	<i>PLA2G12A</i>
A 69 P021336	<i>PLA2G6</i>
A 69 P083106	<i>PLAC8</i>
Probe ID	Gene Symbol
A 69 P095967	<i>PLAC9</i>
A 69 P035516	<i>PLD2</i>
A 69 P104091	<i>PLEKHA2</i>
A 69 P035686	<i>PLSCR3</i>
A 69 P075221	<i>PMF1</i>
A 69 P122056	<i>PNRC2</i>
A 69 P010656	<i>POLR2G</i>
A 69 P073406	<i>POU2F1</i>
A 69 P095641	<i>PPA1</i>
A 69 P011366	<i>PPP1CA</i>
A 69 P022406	<i>PPP2R5E</i>
A 69 P014167	<i>PPP6C</i>
A 69 P108946	<i>PRKAB1</i>
A 69 P026301	<i>PRPF6</i>
A 69 P038361	<i>PSMB9</i>
A 69 P117581	<i>PTMA</i>
A 69 P049771	<i>PTPRK</i>
A 69 P086481	<i>PTPRU</i>
A 69 P078262	<i>PURB</i>
A 69 P101236	<i>PYGL</i>
A 69 P128726	<i>R3HDM1</i>
A 69 P051451	<i>RAD51AP1</i>
A 69 P078115	<i>RALA</i>
A 69 P054471	<i>RASSF3</i>
A 69 P127891	<i>RBM17</i>
A 69 P087276	<i>RCC2</i>
A 69 P011116	<i>RNASEH2C</i>
A 69 P012921	<i>RNF38</i>
A 69 P038266	<i>RNF5</i>
A 69 P066027	<i>RNMT</i>
A 69 P060612	<i>ROCK2</i>
A 69 P035056	<i>RPA1</i>
A 69 P050111	<i>RPE</i>
A 69 P066516	<i>RPRD1A</i>
A 69 P046049	<i>RPS16</i>
A 69 P003934	<i>RPS27L</i>
A 69 P109130	<i>SBSPON</i>
A 69 P025090	<i>SCAND1</i>
A 69 P060501	<i>SDC1</i>

A 69 P014891	<i>SDCCAG3</i>
A 69 P066861	<i>SEC11C</i>
A 69 P024066	<i>SEC23B</i>
A 69 P057791	<i>SEPT10</i>
A 69 P050541	<i>SERPINE2</i>
A 69 P101371	<i>SERTAD4</i>
A 69 P025331	<i>SGK2</i>
A 69 P078767	<i>SHFM</i>
A 69 P076367	<i>SIKE1</i>
A 69 P011651	<i>SLC22A18</i>
A 69 P031482	<i>SLC25A10</i>
A 69 P060231	<i>SLC30A3</i>
A 69 P009136	<i>SLC35C1</i>
A 69 P066521	<i>SLC39A6</i>
A 69 P032426	<i>SMARCD2</i>
A 69 P079721	<i>SND1</i>
A 69 P079141	<i>SNX10</i>
A 69 P024106	<i>SNX5</i>
A 69 P057788	<i>SOWAHC</i>
A 69 P079006	<i>SP8</i>
A 69 P036300	<i>SREBF1</i>
A 69 P087601	<i>SRM</i>
A 69 P086936	<i>SRSF10</i>
A 69 P034866	<i>SSH2</i>
A 69 P033022	<i>STAT5A</i>
A 69 P061316	<i>STC2</i>
A 69 P040906	<i>STK24</i>
A 69 P120056	<i>STRA13</i>
A 69 P070106	<i>SWSAP1</i>
A 69 P090156	<i>SYAP1</i>
Probe ID	Gene Symbol
A 69 P066336	<i>TAF4B</i>
A 69 P038356	<i>TAP1</i>
A 69 P043811	<i>TCEA1</i>
A 69 P086977	<i>TCEB3</i>
A 69 P023641	<i>TECPR2</i>
A 69 P043432	<i>TERF1</i>
A 69 P043766	<i>TGS1</i>
A 69 P061631	<i>THG1L</i>
A 69 P056281	<i>THUMPD3</i>
A 69 P011046	<i>TIGD3</i>
A 69 P054127	<i>TIMELESS</i>
A 69 P026791	<i>TJP2</i>
A 69 P089116	<i>TMEM184C</i>
A 69 P022556	<i>TMEM229B</i>
A 69 P086391	<i>TMEM39B</i>
A 69 P075206	<i>TMEM79</i>
A 69 P003605	<i>TMSB4X</i>
A 69 P087501	<i>TNFRSF1B</i>
A 69 P039276	<i>TNFRSF21</i>

A 69 P035681	<i>TNK1</i>
A 69 P095151	<i>TNKS2</i>
A 69 P098186	<i>TPM1</i>
A 69 P012831	<i>TPM2</i>
A 69 P075492	<i>TPM3</i>
A 69 P021951	<i>TRABD</i>
A 69 P010877	<i>TRMT112</i>
A 69 P007241	<i>TSR2</i>
A 69 P066291	<i>TTC39C</i>
A 69 P010651	<i>TTC9C</i>
A 69 P055021	<i>TLL3</i>
A 69 P097941	<i>UACA</i>
A 69 P055241	<i>UBA3</i>
A 69 P016901	<i>UBASH3A</i>
A 69 P050938	<i>UBE2F</i>
A 69 P061601	<i>UBLCP1</i>
A 69 P129041	<i>UBQLN1</i>
A 69 P044272	<i>UBR5</i>
A 69 P040162	<i>UFM1</i>
A 69 P045231	<i>URI1</i>
A 69 P039877	<i>USP12</i>
A 69 P054416	<i>USP15</i>
A 69 P036346	<i>USP22</i>
A 69 P018971	<i>USP31</i>
A 69 P083796	<i>USP46</i>
A 69 P051641	<i>USP5</i>
A 69 P093106	<i>VGLL1</i>
A 69 P081855	<i>VPS4A</i>
A 69 P008077	<i>VTA1</i>
A 69 P079647	<i>WASL</i>
A 69 P040251	<i>WDFY2</i>
A 69 P015581	<i>WRN</i>
A 69 P086286	<i>YARS</i>
A 69 P059991	<i>YIPF4</i>
A 69 P091312	<i>YIPF6</i>
A 69 P012086	<i>YME1L1</i>
A 69 P044247	<i>YWHAZ</i>
A 69 P086306	<i>ZBTB8OS</i>
A 69 P094881	<i>ZDHHC16</i>
A 69 P015771	<i>ZDHHC2</i>
A 69 P082381	<i>ZDHHC7</i>
A 69 P038768	<i>ZFAND3</i>
A 69 P037769	<i>ZNRD1</i>
A 69 P113356	unnamed
A 69 P045483	unnamed
A 69 P117462	unnamed
A 69 P035656	unnamed
A 69 P106333	unnamed
A 69 P109261	unnamed
Probe ID	Gene Symbol

A 69 P110556	unnamed
A 69 P107726	unnamed
A 69 P117328	unnamed
A 69 P111439	unnamed
A 69 P111456	unnamed
A 69 P109514	unnamed
A 69 P112881	unnamed
A 69 P106046	unnamed
A 69 P113537	unnamed
A 69 P113769	unnamed
A 69 P114319	unnamed
A 69 P113900	unnamed
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A 69 P097661	unnamed
A 69 P102651	unnamed
A 69 P107767	unnamed
A 69 P103396	unnamed
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A 69 P111716	unnamed
A 69 P104227	unnamed
A 69 P056891	unnamed
A 69 P011171	unnamed
A 69 P103621	unnamed
A 69 P101586	unnamed
A 69 P101588	unnamed
A 69 P126006	unnamed
A 69 P117461	unnamed
A 69 P124541	unnamed
A 69 P125606	unnamed
A 69 P101587	unnamed

Gene Name
abhydrolase domain containing 11
actin, alpha 1, skeletal muscle
actin, beta
Arf-GAP with dual PH domain-containing protein 1
1-acyl-sn-glycerol-3-phosphate acyltransferase alpha
AHA1, activator of heat shock 90kDa protein ATPase homolog 1 (yeast)
A kinase (PRKA) interacting protein 1
akirin 1
aldehyde dehydrogenase 18 family, member A1
annexin A8
adaptor-related protein complex 1, mu 2 subunit
arginase, type II
actin-related protein 3
ankyrin repeat and SOCS box protein 3
activating signal cointegrator 1 complex subunit 2
activating transcription factor 6 beta
autophagy related 4C, cysteine peptidase
antizyme inhibitor 1
bromodomain adjacent to zinc finger domain protein 1A
basic leucine zipper and W2 domains 1
chromosome 11 open reading frame, human C17orf70
chromosome 1 open reading frame, human C14orf166
chromosome 7 open reading frame, human C14orf58
calcium binding protein 39
carbamoyl-phosphate synthetase 2, aspartate transcarbamylase, and dihydroorotase
CAP, adenylate cyclase-associated protein 1 (yeast)
cell cycle associated protein 1
cysteinyl-tRNA synthetase
caspase 7, apoptosis-related cysteine peptidase
core-binding factor, beta subunit
chromobox homolog 3
coiled-coil domain containing 12
cyclin E1
cell division cycle 42
CDC42 small effector 1
CUB domain containing protein 1
cyclin-dependent kinase inhibitor 1B (p27, Kip1)
chromodomain protein, Y-like
cat eye syndrome chromosome region, candidate 5
centromere protein C
centrosomal protein 19kDa
centrosomal protein 44kDa
checkpoint kinase 2
cell death-inducing DFFA-like effector c
cytoplasmic linker associated protein 2
claudin 6
chloride intracellular channel 1
cornifelin
coenzyme Q2 4-hydroxybenzoate polyprenyltransferase

coronin, actin binding protein, 1B
coactosin-like 1 (Dictyostelium)
cleavage and polyadenylation specific factor 2, 100kDa
cAMP responsive element binding protein 1
cAMP responsive element binding protein 3-like 4
casein kinase 2, beta polypeptide
cysteine and glycine-rich protein 1
cystatin A (stefin A)
CTD (carboxy-terminal domain, RNA polymerase II, polypeptide A) small phosphatase like 2
catenin, beta like 1
catenin (cadherin-associated protein), delta 1
CTP synthase 1
CTR9, Paf1/RNA polymerase II complex component
CTTNBP2 N-terminal like
CWC25 spliceosome-associated protein homolog (S. cerevisiae)
drebrin-like
deoxycytidine kinase
decapping mRNA 2
DEAD (Asp-Glu-Ala-Asp) box polypeptide 19A
DEAD (Asp-Glu-Ala-Asp) box polypeptide 19B
Gene Name
DEAD (Asp-Glu-Ala-Asp) box polypeptide 41
DEAD (Asp-Glu-Ala-Asp) box polypeptide 52
DENN/MADD domain containing 5B
desumoylating isopeptidase 2
DEAH (Asp-Glu-Ala-His) box polypeptide 36
DEAH (Asp-Glu-Ala-His) box polypeptide 38
DnaJ (Hsp40) homolog, subfamily C, member 17
DnaJ (Hsp40) homolog, subfamily C, member 18
D4, zinc and double PHD fingers family 2
dipeptidyl-peptidase 6
dipeptidyl-peptidase 9
dpy-19-like 3 (C. elegans)
destrin (actin depolymerizing factor)
decapping and exoribonuclease protein
E2F transcription factor 1
E2F transcription factor 2
E2F transcription factor 4, p107/p130-binding
euchromatic histone-lysine N-methyltransferase 1
eukaryotic translation initiation factor 3, subunit C
E74-like factor 4 (ets domain transcription factor)
elongator acetyltransferase complex subunit 4
emerin
endo-beta-N-acetylglucosaminidase
enolase-phosphatase 1
EGF domain-specific O-linked N-acetylglucosamine (GlcNAc) transferase
epithelial splicing regulatory protein 1
exocyst complex component 6
exosome component 10
fumarylacetoacetate hydrolase (fumarylacetoacetase)

family with sequence similarity 60, member A
family with sequence similarity 76, member A
family with sequence similarity 98, member B
F-box protein 45
ferrochelatase
fermitin family member 2
free fatty acid receptor 2-like
formin-like 1
farnesyltransferase, CAAX box, beta
glucose 6 phosphatase, catalytic, 3
cyclin G associated kinase
UDP-N-acetyl-alpha-D-galactosamine:polypeptide N-acetylgalactosaminyltransferase 3
GDP dissociation inhibitor 2
gap junction protein, beta 3, 31kDa
gap junction protein, beta 5, 31.1kDa
GLE1 RNA export mediator
glycolipid transfer protein
glucosamine (UDP-N-acetyl)-2-epimerase/N-acetylmannosamine kinase
guanine nucleotide binding protein (G protein), gamma 12
GPALPP motifs containing 1
G protein-coupled receptor 180
G protein-coupled receptor kinase 6
growth hormone regulated TBC protein 1
general transcription factor IIIC, polypeptide 2, beta 110kDa
histone deacetylase 8
hematological and neurological expressed 1-like
heparanase
hypoxia up-regulated 1
immunoglobulin-binding protein 1
integrin-linked kinase
inducible nitric oxide synthase
inositol polyphosphate-5-phosphatase, 75kDa
integrator complex subunit 6
integrator complex subunit 9
potassium channel tetramerization domain containing 14
lysine (K)-specific demethylase 4C
kinesin family member 14
kinesin family member 21A
late endosomal/lysosomal adaptor, MAPK and MTOR activator 2
LIM homeobox 3
Gene Name
lamin B2
caspase-15
prothymosin alpha-like
chromosome unknown open reading frame, human C19orf57
loss of heterozygosity, 12, chromosomal region 1
leucine-rich pentatricopeptide repeat containing
leucine rich repeat containing 8 family, member D
leucine rich repeat (in FLII) interacting protein 2
LSM12 homolog (S. cerevisiae)

LYR motif containing 9
transcription factor MafF-like
mitogen-activated protein kinase kinase 3
methyl-CpG binding domain protein 2
microcephalin 1
mediator of cell motility 1
mesoderm development candidate 1
mesoderm specific transcript
monoglyceride lipase
mahogunin ring finger 1, E3 ubiquitin protein ligase
makorin ring finger protein 2
malectin
myeloid leukemia factor 2
MOB kinase activator 3B
molybdenum cofactor sulfurase
mannose phosphate isomerase
M-phase specific PLK1 interacting protein
mitochondrial ribosomal protein L13
mitochondrial ribosomal protein L49
metastasis associated 1 family, member 2
metadherin
5,10-methenyltetrahydrofolate synthetase (5-formyltetrahydrofolate cyclo-ligase)
myotubularin related protein 7
mechanistic target of rapamycin (serine/threonine kinase)
mutY homolog
v-myc avian myelocytomatosis viral oncogene lung carcinoma derived homolog
myeloid differentiation primary response 88
myosin, heavy chain 7, cardiac muscle, beta
mitotic-spindle organizing protein 1-like
asparaginyl-tRNA synthetase
non-SMC condensin-2 complex subunit D3
nuclear cap binding protein subunit 2, 20kDa
nuclear receptor coactivator 3
nuclear receptor coactivator 7
NHL repeat containing 2
NOD-like receptor family CARD domain containing 5
nuclear protein, ataxia-telangiectasia locus
neuroblastoma RAS viral (v-ras) oncogene homolog
NOP2/Sun domain family, member 3
nucleoporin 88kDa
olfactory receptor 4K15
platelet-activating factor acetylhydrolase 2, 40kDa
p21 protein (Cdc42/Rac)-activated kinase 6
partitioning defective 3 homolog
PAX-interacting protein 1 is a protein
polycomb group ring finger 1
protein disulfide isomerase family A, member 3
PDZ and LIM domain 5
phosphoprotein enriched in astrocytes 15
profilin 1

PHD finger protein 10
PHD finger protein 20
phosphatidylinositol binding clathrin assembly protein
p53-induced protein with a death domain
pim-1 oncogene
protein (peptidylprolyl cis/trans isomerase) NIMA-interacting, 4 (parvulin)
pyruvate kinase, muscle
phospholipase A2, group XIIA
phospholipase A2, group VI (cytosolic, calcium-independent)
placenta-specific gene 8 protein-like
Gene Name
placenta-specific 9
phospholipase D2
pleckstrin homology domain containing, family A (phosphoinositide binding specific) member 2
phospholipid scramblase 3
polyamine-modulated factor 1
proline-rich nuclear receptor coactivator 2
polymerase (RNA) II (DNA directed) polypeptide G
POU class 2 homeobox 1
pyrophosphatase (inorganic) 1
protein phosphatase 1, catalytic subunit, alpha isozyme
protein phosphatase 2, regulatory subunit B', epsilon isoform
protein phosphatase 6, catalytic subunit
protein kinase, AMP-activated, beta 1 non-catalytic subunit
pre-mRNA processing factor 6
proteasome (prosome, macropain) subunit, beta type, 9
prothymosin alpha
protein tyrosine phosphatase, receptor type, K
protein tyrosine phosphatase, receptor type, U
purine-rich element binding protein B
phosphorylase, glycogen, liver
R3H domain containing 1
RAD51 associated protein 1
v-ral simian leukemia viral oncogene homolog A (ras related)
Ras association (RalGDS/AF-6) domain family member 3
RNA binding motif protein 17
regulator of chromosome condensation 2
ribonuclease H2, subunit C
ring finger protein 38
ring finger protein 5, E3 ubiquitin protein ligase
RNA (guanine-7-) methyltransferase
Rho-associated, coiled-coil containing protein kinase 2
replication protein A1, 70kDa
ribulose-5-phosphate-3-epimerase
regulation of nuclear pre-mRNA domain containing 1A
ribosomal protein S16
ribosomal protein S27-like
somatomedin B and thrombospondin, type 1 domain containing
SCAN domain containing 1
syndecan 1

serologically defined colon cancer antigen 3
SEC11 homolog C (<i>S. cerevisiae</i>)
Sec23 homolog B (<i>S. cerevisiae</i>)
septin 10
serpin peptidase inhibitor, clade E (nexin, plasminogen activator inhibitor type 1), member 2
SERTA domain containing 4
serum/glucocorticoid regulated kinase 2
uncharacterized LOC100052200
suppressor of IKBKE 1
solute carrier family 22, member 18
solute carrier family 25 (mitochondrial carrier; dicarboxylate transporter), member 10
solute carrier family 30 (zinc transporter), member 3
solute carrier family 35 (GDP-fucose transporter), member C1
solute carrier family 39 (zinc transporter), member 6
SWI/SNF related, matrix associated, actin dependent regulator of chromatin, subfamily d, member 2
staphylococcal nuclease and tudor domain containing 1
sorting nexin 10
sorting nexin 5
sosondowah ankyrin repeat domain family member C
specificity protein 8
sterol regulatory element binding transcription factor 1
spermidine synthase
serine/arginine-rich splicing factor 10
slingshot protein phosphatase 2
signal transducer and activator of transcription 5A
stanniocalcin 2
serine/threonine kinase 24
stimulated by retinoic acid 13
SWIM-type zinc finger 7 associated protein 1
synapse associated protein 1
Gene Name
TAF4b RNA polymerase II, TATA box binding protein (TBP)-associated factor, 105kDa
transporter 1, ATP-binding cassette, sub-family B (MDR/TAP)
transcription elongation factor A (SII), 1
transcription elongation factor B (SIII), polypeptide 3 (110kDa, elongin A)
tectonin beta-propeller repeat containing 2
telomeric repeat binding factor (NIMA-interacting) 1
trimethylguanosine synthase 1
tRNA-histidine guanylyltransferase 1-like (<i>S. cerevisiae</i>)
THUMP domain containing 3
tigger transposable element derived 3
timeless circadian clock
tight junction protein 2
transmembrane protein 184C
transmembrane protein 229B
transmembrane protein 39B
transmembrane protein 79
thymosin beta 4, X-linked
tumor necrosis factor receptor superfamily, member 1B
tumor necrosis factor receptor superfamily, member 21

GenBank ID	R ²	p-value
XM_005598687	0.71	3.86E-09
XM_001497713	0.73	1.37E-10
NM_001081838	0.72	1.92E-10
XM_005598593	0.77	8.75E-12
CX601316	0.71	3.60E-10
XM_001493748	0.71	4.33E-10
XM_005612151	0.81	2.24E-13
CX598172	0.76	1.16E-11
JL638119	0.75	3.23E-11
XM_001500694	0.71	4.29E-10
XM_005611945	0.71	5.11E-10
AY647160	0.71	4.24E-10
AF307853	0.77	6.70E-12
DN509427	0.73	1.06E-10
CX603744	0.76	1.59E-11
XM_001493153	0.74	4.91E-11
JL616201	0.76	1.17E-11
HQ890112	0.73	1.47E-10
JL638758	0.71	5.01E-10
XM_001503602	0.77	9.74E-12
XM_001489884	0.72	2.81E-10
XM_005603488	0.71	2.89E-09
JL640968	0.77	4.16E-11
JL615904	0.76	1.59E-11
XM_001502425	0.78	3.96E-12
JL617910	0.76	1.27E-11
JL637874	0.75	3.39E-11
DN508416	0.78	4.17E-12
XM_005614905	0.74	7.03E-11
XM_005608538	0.71	4.93E-10
JL619167	0.70	5.46E-11
XM_005600744	0.73	9.72E-11
XM_005596119	0.76	1.49E-11
XM_005607371	0.74	7.50E-11
XM_003365033	0.74	4.62E-11
XM_005600765	0.73	1.19E-10
XM_005611046	0.71	2.96E-10
JL622603	0.75	2.64E-11
XM_005610823	0.72	1.73E-09
XM_001497321	0.75	3.27E-11
XM_001501144	0.75	3.27E-10
JL626033	0.78	2.30E-12
JL621777	0.75	2.55E-11
XM_001494390	0.71	4.53E-10
JL617202	0.70	6.50E-10
XM_001504668	0.72	1.95E-10
XM_001491355	0.71	3.23E-09
XM_001501130	0.73	1.22E-10
JL633010	0.72	1.72E-10

CX602805	0.73	9.23E-10
XM 001499862	0.74	8.04E-11
HQ889891	0.75	3.52E-11
JQ044378	0.73	1.13E-10
XM 005610093	0.71	4.42E-10
XM 005603732	0.71	3.10E-09
XM 001494682	0.82	1.04E-11
DN509011	0.74	3.51E-10
JL621754	0.70	6.97E-10
XM 005604625	0.73	1.15E-10
XM 005598153	0.75	1.45E-09
XM 001503218	0.76	1.01E-11
CD469509	0.74	6.33E-11
XM 005610321	0.75	3.38E-11
JL618722	0.75	2.25E-11
XM 001495620	0.73	1.30E-10
XM 001489225	0.72	1.58E-10
JL621177	0.74	6.55E-11
JL638733	0.71	4.53E-10
XM 001500964	0.77	7.02E-12
GenBank ID	R²	p-value
XM 001502190	0.75	3.73E-11
JL622604	0.71	3.39E-10
JL636984	0.79	1.15E-12
XM 005607934	0.80	4.94E-13
HQ889902	0.71	5.21E-10
DN509378	0.71	3.01E-10
XM 001503513	0.71	3.90E-10
JL622515	0.71	4.15E-10
XM 005598303	0.71	4.01E-10
HQ890234	0.81	2.27E-12
XM 005611475	0.76	1.19E-11
JL618420	0.73	1.36E-10
JL638590	0.73	1.24E-10
XM 005603754	0.70	5.02E-09
XM 005604573	0.79	1.79E-12
XM 001504222	0.80	4.35E-13
XM 001915760	0.72	2.35E-10
XM 005605987	0.74	7.68E-11
DN509049	0.72	2.57E-10
XM 001500235	0.80	7.47E-13
-	0.74	7.22E-11
CX601838	0.72	2.44E-10
XM 001490670	0.74	5.80E-11
HQ890037	0.72	2.77E-10
XM 003363051	0.79	2.05E-12
XM 005613206	0.71	4.71E-10
JL623434	0.80	3.86E-12
BI961526	0.80	9.03E-13
XM 001487834	0.72	1.98E-09

XM 001503058	0.76	1.11E-11
XM 001500535	0.71	3.49E-10
XM 005603361	0.74	5.17E-11
JL622597	0.73	9.74E-11
XM 001488915	0.71	3.14E-10
XM 005605183	0.77	9.44E-12
XM 005596157	0.71	3.69E-10
XM 005597315	0.72	1.66E-10
-	0.76	7.35E-10
XM 005597343	0.71	3.78E-11
XM 001917838	0.74	7.77E-11
JL637864	0.72	1.61E-10
HQ890256	0.72	1.59E-10
XM 001503717	0.72	2.05E-10
XM 005607223	0.75	2.39E-11
JL626559	0.70	6.98E-10
DN508618	0.72	2.68E-10
XM 001497313	0.72	1.80E-10
XM 003365109	0.77	5.92E-12
JL616052	0.70	6.60E-10
JL638930	0.82	1.07E-11
XM 005599198	0.77	5.16E-12
XM 005601388	0.71	3.68E-10
JL622390	0.73	8.20E-11
XM 005614277	0.70	6.96E-10
XM 001497464	0.72	2.87E-10
XM 001493282	0.73	1.28E-10
XM 005611630	0.74	6.58E-11
XM 005615041	0.77	9.36E-12
XM 001504599	0.71	4.02E-10
AF329377	0.73	9.63E-11
JL638502	0.78	2.79E-12
DN504231	0.70	5.88E-10
JL635793	0.80	7.02E-13
XM 001494397	0.71	3.75E-10
XM 001492896	0.80	4.81E-11
XM 005608094	0.78	2.97E-12
XM 005611060	0.81	3.05E-13
CX604072	0.75	2.94E-11
XM 001917984	0.72	1.76E-10
GenBank ID	R²	p-value
XM 005611751	0.76	1.69E-11
XM 005601047	0.71	4.88E-10
XM 001498434	0.76	1.99E-11
XM 005613574	0.78	4.13E-12
XM 001501345	0.72	2.60E-10
XM 005600023	0.74	5.67E-10
NM 001257125	0.75	2.64E-10
JL616096	0.77	6.86E-12
XM 005597348	0.70	5.71E-11

XM 003362423	0.78	3.04E-12
XM 001501373	0.79	1.15E-12
XM 005597856	0.76	1.10E-11
JL640559	0.76	1.30E-11
CX601527	0.74	4.47E-11
JL641420	0.71	3.07E-10
NM 001256943	0.70	6.45E-10
XM 001503034	0.73	1.26E-10
XM 001488819	0.72	2.41E-10
XM 005599101	0.71	4.07E-10
XM 001490531	0.71	3.18E-10
XM 001488524	0.72	1.93E-10
XM 003365166	0.72	1.72E-10
XM 001497163	0.80	8.89E-13
XM 005612931	0.79	1.16E-12
JL620937	0.74	6.82E-11
XM 001494484	0.81	3.55E-12
DN508047	0.76	1.71E-10
XM 001492016	0.72	2.21E-10
XM 001494695	0.75	1.96E-09
JL616963	0.72	2.17E-11
XM 001487971	0.74	4.63E-11
XM 001488761	0.71	5.13E-10
JL619298	0.77	3.23E-10
XM 001496230	0.76	1.78E-11
XM 001916493	0.70	5.93E-10
JL619941	0.71	3.32E-10
NM 001081758	0.72	2.58E-10
XM 005603696	0.72	1.63E-10
JL637795	0.73	1.12E-10
DN504108	0.76	1.46E-11
XM 001501008	0.72	1.78E-10
XM 005604691	0.71	5.07E-10
DN510980	0.73	9.01E-11
JL619805	0.71	4.42E-10
XM 001915501	0.75	3.09E-11
JL620116	0.74	4.83E-11
JL615886	0.75	2.27E-11
JL620299	0.73	1.43E-10
JL641558	0.78	2.47E-12
XM 005603367	0.75	1.29E-09
XM 001504113	0.73	1.15E-09
XM 005603152	0.73	1.31E-10
XM 005606979	0.76	1.38E-11
JL624919	0.73	8.63E-11
JL638891	0.75	2.09E-09
JL616233	0.75	4.08E-11
XM 005608613	0.73	8.47E-11
XM 001504423	0.72	2.75E-10
DN504898	0.77	4.68E-12

XM 001499464	0.73	1.31E-10
JL621112	0.72	2.01E-10
AB331218	0.74	6.13E-11
XM 005613649	0.72	1.56E-10
XM 001500225	0.77	6.98E-12
DN508625	0.74	5.33E-10
NM 001143794	0.70	4.46E-11
JL640117	0.72	2.16E-10
XM 001501364	0.72	1.55E-10
DN508909	0.71	3.19E-10
GenBank ID	R²	p-value
DN509444	0.72	2.59E-10
XM 001504751	0.77	5.21E-12
XM 005606304	0.70	7.00E-10
XM 001503068	0.74	6.91E-11
XM 005610021	0.78	3.83E-11
JL616005	0.78	4.45E-12
DN504841	0.73	8.59E-10
XM 005609625	0.72	1.56E-09
JL637427	0.73	9.96E-11
CX593336	0.73	1.04E-10
JL637413	0.74	5.28E-11
JL616184	0.77	9.31E-12
JL626247	0.71	2.41E-09
XM 005604884	0.73	9.55E-11
CX602478	0.71	3.48E-10
CD469194	0.75	2.63E-11
XM 005596916	0.75	2.24E-11
XM 005607465	0.78	2.84E-12
JL641589	0.75	2.16E-10
NM 001145889	0.72	2.74E-10
XM 001915455	0.76	1.41E-11
XM 001494429	0.70	6.34E-10
XM 001494123	0.78	3.22E-12
XM 005611368	0.77	4.75E-12
JL637530	0.74	5.92E-11
XM 005614849	0.78	2.98E-12
XM 001494343	0.73	1.44E-10
XM 005605625	0.80	8.33E-13
DN504902	0.71	2.50E-09
JL638289	0.74	6.89E-11
XM 005600222	0.71	4.32E-10
HQ890260	0.71	5.19E-10
CX599972	0.73	1.53E-10
XM 001497089	0.70	6.69E-10
DN505756	0.70	6.71E-10
EF397516	0.75	3.11E-11
XM 005615116	0.73	8.56E-11
XM 001501876	0.76	8.82E-10
XM 001501742	0.78	3.79E-12

XM 001498519	0.71	4.36E-10
CX605786	0.72	1.28E-09
JL625152	0.79	1.67E-11
JL626070	0.76	1.25E-11
JL640388	0.72	1.85E-10
XM 001490616	0.75	3.46E-11
XM 005604636	0.74	5.73E-11
DN507460	0.71	2.87E-11
JL628349	0.71	5.18E-10
XM 001492540	0.70	6.85E-10
XM 005597059	0.72	1.59E-10
XM 005600126	0.71	5.02E-10
XM 001489118	0.76	1.53E-11
JL637585	0.73	1.06E-10
XM 001500833	0.74	4.66E-11
CX598325	0.72	1.51E-09
JL620875	0.71	3.10E-10
JL640484	0.74	4.81E-11
XM 005599750	0.80	6.94E-13
-	0.76	1.89E-11
XM 001918214	0.70	5.40E-10
CX605564	0.78	3.24E-12
JL617604	0.74	4.91E-11
XM 005597635	0.77	7.83E-11
XM 005597380	0.72	2.60E-10
XM 005599226	0.71	4.14E-10
XM 005601307	0.71	3.10E-10
XM 001489263	0.72	2.66E-10
XM 001916356	0.73	1.50E-10
JL620792	0.75	3.75E-11
GenBank ID	R ²	p-value
XM 001495354	0.75	3.89E-11
JL641406	0.76	1.61E-11
JL617641	0.74	5.30E-11
NM 001252407	0.70	6.09E-10
-	0.73	1.00E-10
XM 001492421	0.73	1.11E-10
XM 005613126	0.73	9.79E-11
XM 001500894	0.70	5.63E-10
JL640113	0.71	3.77E-10
XM 005598304	0.77	6.13E-12
XM 001504843	0.75	3.78E-11
JL634933	0.74	4.37E-11
JL615972	0.72	1.86E-10
XM 005605261	0.71	3.70E-10
XM 001500047	0.74	4.92E-11
XM 001500083	0.75	2.35E-11
NM 001163948	0.71	3.10E-10
XM 005607617	0.72	1.59E-10
XM 001502707	0.79	2.02E-12

XM 001504769	0.75	2.14E-11
XM 001502681	0.76	9.35E-11
-	0.70	6.27E-10
XM 001504497	0.77	5.13E-11
CX601529	0.74	7.94E-11
XM 005606796	0.75	3.19E-11
CX606000	0.70	5.98E-10
JL631974	0.75	3.25E-11
JL641232	0.72	2.70E-10
JL623625	0.74	4.45E-11
CD466389	0.78	2.94E-12
XM 001918075	0.73	9.73E-10
JL620266	0.72	2.16E-10
XM 001492276	0.75	3.43E-11
JL616463	0.70	6.23E-10
JL616302	0.73	8.62E-11
XM 001916233	0.75	2.12E-11
JL617456	0.78	4.12E-12
JL616986	0.73	1.04E-10
JL616724	0.74	6.65E-11
XM 005601110	0.71	3.86E-10
CX604045	0.70	5.72E-10
XM 001488603	0.73	1.26E-10
XM 005598952	0.74	7.36E-11
XM 001917082	0.71	3.92E-10
DN504038	0.70	6.21E-10
XM 001490312	0.72	1.86E-10
CX593920	0.76	1.88E-11
JL617687	0.75	3.72E-11
XM 001502364	0.77	5.44E-12
-	0.77	5.45E-12
XM 005606338	0.73	1.27E-10
XM 001499806	0.75	2.46E-11
CD467959	0.75	2.80E-11
XM 001504869	0.75	3.61E-11
HQ890031	0.71	3.80E-10
JL616991	0.70	5.58E-10
CX595016	0.73	9.10E-11
JL639605	0.77	5.24E-12
JL638664	0.71	3.29E-10
XM 001499928	0.76	1.78E-11
CX592114	0.74	4.39E-12
JL634655	0.72	2.88E-10
DN508371	0.73	1.49E-10
AW260982	0.73	1.11E-10
CD466460	0.70	6.33E-10
CD469426	0.72	1.23E-08
CX593236	0.70	4.81E-11
CX600034	0.72	2.61E-10
GenBank ID	R²	p-value

CX602999	0.77	4.59E-11
CX604004	0.76	9.89E-12
CX604525	0.70	5.28E-10
CX604621	0.77	7.11E-11
CX604703	0.75	3.08E-11
DN504808	0.77	9.68E-12
DN506764	0.72	2.09E-10
DN507904	0.72	1.80E-10
DN508711	0.70	4.52E-11
DN509091	0.70	5.71E-10
DN510112	0.78	4.15E-12
DN510735	0.73	1.05E-10
HQ890009	0.70	6.21E-10
JL615911	0.74	4.19E-11
JL618947	0.78	3.43E-12
JL620804	0.72	2.45E-10
JL622673	0.74	7.35E-11
JL623094	0.70	6.82E-10
JL624661	0.72	1.72E-09
JL637616	0.70	6.03E-10
JL637859	0.76	1.06E-11
XM 005598460	0.75	1.92E-10
-	0.74	5.06E-11
-	0.73	9.93E-11
-	0.72	2.54E-10
-	0.77	9.64E-12
-	0.70	5.77E-10
-	0.73	1.51E-10
-	0.72	2.23E-10
-	0.72	1.61E-10

Probe ID	Gene Symbol	Gene Name
A 69 P027281	<i>ACO1</i>	aconitase 1, soluble
A 69 P079932	<i>AKR1B1</i>	aldo-keto reductase family 1, member B1 (aldose reductase)
A 69 P047321	<i>ALDH16A1</i>	aldehyde dehydrogenase 16 family, member A1
A 69 P104871	<i>ANG</i>	angiogenin, ribonuclease, RNase A family, 5
A 69 P011781	<i>AP2A2</i>	adaptor protein complex 2
A 69 P117083	<i>ARHGEF40</i>	Rho guanine nucleotide exchange factor (GEF) 40
A 69 P099209	<i>AVEN</i>	apoptosis, caspase activation inhibitor
A 69 P032302	<i>AXIN2</i>	axin 2
A 69 P081571	<i>B3GNT9</i>	UDP-GlcNAc:betaGal beta-1,3-N-acetylglucosaminyltransferase 9
A 69 P082126	<i>BCAR1</i>	breast cancer anti-estrogen resistance 1
A 69 P118456	<i>BCAR3</i>	breast cancer anti-estrogen resistance 3
A 69 P052336	<i>BCAT1</i>	branched chain amino-acid transaminase 1, cytosolic
A 69 P005398	<i>BMP4</i>	bone morphogenetic protein 4
A 69 P060948	<i>C5orf45</i>	chromosome 5 open reading frame 45
A 69 P051426	<i>CCND2</i>	cyclin D2
A 69 P038946	<i>CCND3</i>	cyclin D3
A 69 P001306	<i>CD14</i>	CD14 molecule
A 69 P036120	<i>CENPV</i>	centromere protein V
A 69 P109642	<i>CFAP58</i>	cilia and flagella associated protein 58
A 69 P021003	<i>CKAP4</i>	cytoskeleton-associated protein 4
A 69 P081505	<i>CMTM3</i>	uncharacterized LOC100629814
A 69 P054108	<i>CNPY2</i>	canopy FGF signaling regulator 2
A 69 P004905	<i>COL3A1</i>	collagen, type III, alpha 1
A 69 P042616	<i>COL5A2</i>	collagen, type V, alpha 2
A 69 P048667	<i>COX7A2</i>	cytochrome c oxidase subunit 7A2, mitochondrial-like
A 69 P043021	<i>CYP20A1</i>	cytochrome P450 20A1-like
A 69 P000861	<i>DCN</i>	decorin
A 69 P064116	<i>DDT</i>	D-dopachrome tautomerase
A 69 P129521	<i>DHRS1</i>	dehydrogenase/reductase (SDR family) member 1
A 69 P081346	<i>DOK4</i>	docking protein 4
A 69 P110149	<i>DUSP8</i>	dual specificity phosphatase 8
A 69 P014466	<i>ENDOG</i>	endonuclease G
A 69 P050486	<i>EPHA4</i>	EPH receptor A4
A 69 P108494	<i>FAM20C</i>	family with sequence similarity 20, member C
A 69 P052903	<i>FKBP11</i>	FK506 binding protein 11, 19 kDa
A 69 P075411	<i>FLAD1</i>	flavin adenine dinucleotide synthetase 1
A 69 P036416	<i>GMDS</i>	GDP-mannose 4,6-dehydratase
A 69 P102256	<i>GNAS</i>	guanine nucleotide-binding protein, stimulatory alpha subunit
A 69 P119491	<i>GNG5</i>	guanine nucleotide binding protein (G protein), gamma 5
A 69 P096337	<i>GNPAT</i>	glyceronephosphate O-acyltransferase
A 69 P018207	<i>GTF2I</i>	general transcription factor 2i
A 69 P088656	<i>HAND2</i>	heart and neural crest derivatives expressed 2
A 69 P001257	<i>HAPLN1</i>	hyaluronan and proteoglycan link protein 1
A 69 P006761	<i>ISYNA1</i>	inositol-3-phosphate synthase 1-like
A 69 P042251	<i>ITGA6</i>	integrin, alpha 6
A 69 P021358	<i>KDEL3</i>	ER lumen protein retaining receptor 3
A 69 P101161	<i>KLHDC1</i>	kelch domain containing 1
A 69 P021086	<i>LARGE</i>	like-glycosyltransferase
A 69 P020746	<i>LTA4H</i>	leukotriene A4 hydrolase

A 69 P004727	<i>LUM</i>	lumican
A 69 P116900	<i>MAGED4</i>	MAGE family member D4
A 69 P032506	<i>MRC</i>	peptidoglycan glycosyltransferase
A 69 P078173	<i>MRPS24</i>	28S ribosomal protein S24
A 69 P117355	<i>MXRA8</i>	matrix-remodelling associated 8
A 69 P076408	<i>OLFML3</i>	olfactomedin-like 3
A 69 P051626	<i>P3H3</i>	prolyl 3-hydroxylase 3
A 69 P062746	<i>P4HA2</i>	prolyl 4-hydroxylase subunit alpha-2
A 69 P000112	<i>PAG</i>	pregnancy-associated glycoprotein
A 69 P088732	<i>PALLD</i>	palladin, cytoskeletal associated protein
A 69 P039666	<i>PARP4</i>	poly (ADP-ribose) polymerase family, member 4
Probe ID	Gene Symbol	Gene Name
A 69 P064531	<i>PATZ1</i>	POZ (BTB) and AT hook containing zinc finger 1
A 69 P108582	<i>PID1</i>	phosphotyrosine interaction domain containing 1
A 69 P041886	<i>PKP4</i>	plakophilin 4
A 69 P057531	<i>PLOD2</i>	procollagen-lysine, 2-oxoglutarate 5-dioxygenase 2
A 69 P019506	<i>PPL</i>	periplakin
A 69 P052636	<i>PRICKLE1</i>	prickle homolog 1 (Drosophila)
A 69 P108491	<i>PRKAR1B</i>	cAMP-dependent protein kinase type I-beta regulatory subunit
A 69 P087965	<i>PRKCZ</i>	protein kinase C, zeta
A 69 P019796	<i>PRSS22</i>	protease, serine, 22
A 69 P034761	<i>RAB34</i>	RAB34, member RAS oncogene family
A 69 P073061	<i>RCN1</i>	reticulocalbin 1, EF-hand calcium binding domain
A 69 P068486	<i>REXO2</i>	RNA exonuclease 2
A 69 P040276	<i>RNASEH2B</i>	ribonuclease H2, subunit B
A 69 P001083	<i>S100A6</i>	S100 calcium binding protein A6
A 69 P049218	<i>SCML4</i>	sex comb on midleg-like 4 (Drosophila)
A 69 P018961	<i>SCNN1B</i>	sodium channel, non-voltage-gated 1, beta subunit
A 69 P090296	<i>SMS</i>	spermine synthase
A 69 P120511	<i>SPIN2B</i>	spindlin family, member 2B
A 69 P095217	<i>STAMBPL1</i>	STAM binding protein-like 1
A 69 P108902	<i>TCF4</i>	transcription factor 4
A 69 P119426	<i>TIGD2</i>	tigger transposable element derived 2
A 69 P114388	<i>TIMM22</i>	mitochondrial import inner membrane translocase subunit
A 69 P003511	<i>TLR1</i>	toll-like receptor 1
A 69 P026746	<i>TMEM2</i>	transmembrane protein 2
A 69 P111881	<i>TSEN2</i>	TSEN2 tRNA splicing endonuclease subunit
A 69 P062597	<i>TXNDC15</i>	thioredoxin domain containing 15
A 69 P042492	<i>UBE2E3</i>	ubiquitin-conjugating enzyme E2E 3
A 69 P074381	<i>UCK2</i>	uridine-cytidine kinase 2
A 69 P059356	<i>UGP2</i>	UDP-glucose pyrophosphorylase 2
A 69 P030451	<i>UMPS</i>	uridine monophosphate synthetase
A 69 P105986	<i>YBX3</i>	Y-box binding protein 3
A 69 P019711	<i>ZNF205</i>	zinc finger protein 205
A 69 P099831	<i>ZNF219</i>	zinc finger protein 219
A 69 P086241	<i>ZNF362</i>	zinc finger protein 362
A 69 P108281	unnamed	-
A 69 P105546	unnamed	-
A 69 P105721	unnamed	-
A 69 P106181	unnamed	-

A 69 P105811	unnamed	-
A 69 P106132	unnamed	-
A 69 P113564	unnamed	-
A 69 P117085	unnamed	-
A 69 P113012	unnamed	-
A 69 P114829	unnamed	-
A 69 P102353	unnamed	-
A 69 P105892	unnamed	-
A 69 P102208	unnamed	-
A 69 P102207	unnamed	-
A 69 P102210	unnamed	-
A 69 P117351	unnamed	-
A 69 P126106	unnamed	-
A 69 P102206	unnamed	-
A 69 P102209	unnamed	-
A 69 P117352	unnamed	-
A 69 P092147	unnamed	-
A 69 P113397	unnamed	-

GenBank ID	R ²	p-value
XM_005605048	0.74	2.70E-09
JL615903	0.71	1.98E-08
XM_005596404	0.72	8.76E-09
XM_005602591	0.73	5.12E-09
DN511181	0.73	6.30E-09
XM_005615164	0.74	3.03E-09
CX605139	0.76	9.84E-10
XM_003362526	0.81	2.19E-11
CX596559	0.76	9.71E-10
XM_005608435	0.72	9.02E-09
-	0.75	1.85E-09
XM_005610980	0.72	7.77E-09
NM_001163970	0.80	2.84E-11
XM_005599175	0.70	2.27E-08
JL639199	0.71	1.59E-08
XM_005603910	0.72	1.20E-08
NM_001081927	0.82	1.02E-11
DN505242	0.78	2.03E-10
CX601247	0.79	6.36E-11
XM_001498236	0.73	1.08E-10
XM_005608536	0.71	1.66E-08
CX603244	0.72	2.12E-10
AF117954	0.77	8.07E-11
XM_001501817	0.81	2.39E-11
DN508199	0.70	2.47E-08
JL615970	0.75	1.15E-09
NM_001081925	0.77	3.09E-10
XM_001489369	0.77	5.23E-12
XM_001489335	0.72	1.05E-08
XM_001494272	0.71	2.08E-08
DN510926	0.76	9.29E-10
XM_005614789	0.75	1.59E-09
XM_003365125	0.74	2.22E-09
XM_005598597	0.73	4.58E-09
CX605254	0.74	2.30E-09
XM_005610061	0.72	1.29E-08
CX602995	0.74	2.75E-09
JL615938	0.85	5.48E-13
XM_001495600	0.79	9.57E-11
JL641522	0.73	6.04E-09
JL639680	0.82	4.90E-12
XM_001915555	0.81	1.88E-11
NM_001082504	0.77	3.57E-10
XM_001503313	0.72	1.28E-08
XM_005601729	0.80	3.98E-11
XM_005606743	0.75	1.77E-09
JL619517	0.78	1.40E-10
XM_005606571	0.72	9.82E-09
JL618379	0.76	6.36E-10

NM_001081780	0.72	1.04E-08
XM_003365657	0.71	1.34E-08
XM_005597903	0.73	1.20E-09
DN505872	0.72	8.13E-09
XM_005607639	0.76	6.74E-10
CX603415	0.72	8.41E-09
XM_005614768	0.74	3.23E-09
CX602516	0.70	2.53E-08
NM_001081943	0.80	3.08E-11
XM_005607735	0.81	1.77E-11
CX597404	0.72	2.24E-10
GenBank ID	R ²	p-value
XM_001496979	0.76	6.47E-10
CX601452	0.77	5.47E-10
-	0.82	7.43E-12
XM_001493103	0.76	1.07E-09
XM_001499654	0.71	1.83E-08
XM_001488203	0.71	1.33E-08
-	0.73	7.03E-09
XM_005607579	0.75	1.82E-09
XM_001498374	0.77	2.97E-10
CX597473	0.80	3.65E-11
XM_001502680	0.71	1.66E-08
DN506865	0.76	9.14E-10
JL616173	0.75	1.21E-09
NM_001081841	0.82	4.80E-12
JL630987	0.72	2.16E-09
XM_005598851	0.77	3.46E-10
HQ890163	0.82	1.16E-11
XM_001496045	0.70	6.62E-10
XM_005602372	0.78	1.37E-10
-	0.77	2.87E-10
JL616321	0.71	1.57E-08
DN510212	0.71	1.65E-08
NM_001256899	0.71	3.22E-10
XM_005604959	0.72	1.28E-08
JL624712	0.74	2.33E-09
JL627170	0.70	2.81E-08
JL616154	0.77	5.28E-10
XM_005609845	0.74	3.01E-09
JL640329	0.75	3.95E-11
JL616314	0.71	1.90E-08
XM_005611039	0.72	8.69E-09
XM_001498793	0.82	5.46E-12
XM_005603201	0.77	4.48E-10
XM_005607455	0.70	2.30E-08
CX598626	0.73	1.46E-10
CX602532	0.77	4.88E-10
CX602574	0.77	4.20E-10
CX602962	0.72	8.63E-09

CX604099	0.75	3.35E-10
CX604969	0.78	1.54E-10
DN508735	0.76	9.62E-10
DN508825	0.75	1.24E-09
DN509455	0.80	5.59E-11
DN511073	0.75	2.57E-10
JL617582	0.71	1.55E-08
JL618607	0.80	3.92E-11
-	0.74	3.98E-09
-	0.74	2.77E-09
-	0.77	5.48E-10
-	0.76	9.51E-10
-	0.76	9.95E-10
-	0.70	2.30E-08
-	0.75	1.12E-09
-	0.76	6.25E-10
-	0.73	6.19E-09
DN508425	0.80	4.50E-11

Probe ID	Gene Symbol
A 69 P003345	<i>ABCB1</i>
A 69 P096011	<i>ABCB10</i>
A 69 P006161	<i>ABCG2</i>
A 69 P015416	<i>ADAM9</i>
A 69 P073426	<i>ADCY10</i>
A 69 P052876	<i>ADCY6</i>
A 69 P031720	<i>AFMID</i>
A 69 P113159	<i>AKR1D1</i>
A 69 P055697	<i>ALAS1</i>
A 69 P036171	<i>ALDH3A2</i>
A 69 P062876	<i>ALDH7A1</i>
A 69 P074391	<i>ALDH9A1</i>
A 69 P083222	<i>ANXA3</i>
A 69 P115591	<i>ARHGAP12</i>
A 69 P028632	<i>ARL15</i>
A 69 P117323	<i>ARNT</i>
A 69 P018301	<i>ASL</i>
A 69 P093171	<i>ATP11C</i>
A 69 P039651	<i>ATP12A</i>
A 69 P080056	<i>ATP6V0A4</i>
A 69 P050706	<i>B3GNT7</i>
A 69 P046636	<i>BCAM</i>
A 69 P027071	<i>BNC2</i>
A 69 P030818	<i>BOC</i>
A 69 P120356	<i>C1H10orf11</i>
A 69 P074046	<i>C5H1orf21</i>
A 69 P034276	<i>CA4</i>
A 69 P081351	<i>CCDC102A</i>
A 69 P028731	<i>CCL28</i>
A 69 P053061	<i>CERS5</i>
A 69 P112559	<i>CLYBL</i>
A 69 P067131	<i>CNDP2</i>
A 69 P002619	<i>COL12A1</i>
A 69 P004643	<i>COL1A2</i>
A 69 P002531	<i>COL3A1</i>
A 69 P121012	<i>COL4A1</i>
A 69 P041101	<i>COL4A2</i>
A 69 P092371	<i>COL4A5</i>
A 69 P079231	<i>CPVL</i>
A 69 P077341	<i>CTBS</i>
A 69 P039041	<i>CUL7</i>
A 69 P062377	<i>CXXC5</i>
A 69 P028831	<i>DAB2</i>
A 69 P043936	<i>DECR1</i>
A 69 P076556	<i>DENND2D</i>
A 69 P087493	<i>DHRS3</i>
A 69 P022311	<i>DHRS7</i>
A 69 P008406	<i>DISP1</i>
A 69 P011141	<i>EFEMP2</i>

A 69 P054976	<i>EMC3</i>
A 69 P008332	<i>ENAH</i>
A 69 P044462	<i>EXT1</i>
A 69 P029106	<i>FAM134B</i>
A 69 P039617	<i>FAM135A</i>
A 69 P080816	<i>FASTK</i>
A 69 P089016	<i>FHDC1</i>
A 69 P109201	<i>FSTL1</i>
A 69 P001436	<i>FTH1</i>
A 69 P001036	<i>FTL</i>
A 69 P102232	<i>G6S</i>
A 69 P116061	<i>GAB1</i>
A 69 P013146	<i>GALNT12</i>
A 69 P027431	<i>GALT</i>
A 69 P001686	<i>GCNT1</i>
A 69 P090497	<i>GK</i>
A 69 P027006	<i>GLDC</i>
A 69 P000521	<i>GM2A</i>
A 69 P078696	<i>GNG11</i>
A 69 P113924	<i>GPC4</i>
Probe ID	Gene Symbol
A 69 P121296	<i>GPHN</i>
A 69 P016046	<i>GPM6A</i>
A 69 P016047	<i>GPM6A</i>
A 69 P068932	<i>GRAMD1B</i>
A 69 P018216	<i>GTF2IRD1</i>
A 69 P129789	<i>HEBP1</i>
A 69 P079206	<i>HIBADH</i>
A 69 P028176	<i>HOMER3</i>
A 69 P033676	<i>HOXB3</i>
A 69 P053541	<i>HOXC4</i>
A 69 P124587	<i>HSDL2</i>
A 69 P110731	<i>IFT20</i>
A 69 P030011	<i>IGF2BP2</i>
A 69 P108221	<i>IKBIP</i>
A 69 P013539	<i>KIAA1958</i>
A 69 P073516	<i>KIFAP3</i>
A 69 P052357	<i>KRAS</i>
A 69 P077981	<i>LAMB1</i>
A 69 P052871	<i>LINC00935</i>
A 69 P091161	<i>LINC01420</i>
A 69 P001586	<i>LITAF</i>
A 69 P077611	<i>LOC100069195</i>
A 69 P097814	<i>LOXL1</i>
A 69 P028266	<i>LPAR2</i>
A 69 P099251	<i>LPCAT4</i>
A 69 P094681	<i>LZTS2</i>
A 69 P107446	<i>MAGED1</i>
A 69 P048626	<i>MB21D1</i>
A 69 P074397	<i>MGST3</i>

A 69 P101777	<i>MONO1</i>
A 69 P021197	<i>MPST</i>
A 69 P057358	<i>MRAS</i>
A 69 P061294	<i>MSX2</i>
A 69 P048631	<i>MTO1</i>
A 69 P039731	<i>N6AMT2</i>
A 69 P073986	<i>NPL</i>
A 69 P097141	<i>NR2F2</i>
A 69 P038516	<i>NUDT3</i>
A 69 P008191	<i>OPN3</i>
A 69 P028776	<i>OXCT1</i>
A 69 P039376	<i>PAQR8</i>
A 69 P095695	<i>PCBD1</i>
A 69 P040961	<i>PCCA</i>
A 69 P036306	<i>PEMT</i>
A 69 P092596	<i>PGRMC1</i>
A 69 P036701	<i>PHACTR1</i>
A 69 P062581	<i>PITX1</i>
A 69 P000641	<i>PLA2G4A</i>
A 69 P041931	<i>PLA2R1</i>
A 69 P032661	<i>PLCD3</i>
A 69 P023992	<i>PLK1S1</i>
A 69 P116681	<i>PMP22</i>
A 69 P078736	<i>PON2</i>
A 69 P085431	<i>PRDX1</i>
A 69 P010881	<i>PRDX5</i>
A 69 P021816	<i>PRR5</i>
A 69 P008271	<i>PSEN2</i>
A 69 P012301	<i>PTPLA</i>
A 69 P083036	<i>PTPN13</i>
A 69 P060796	<i>PXDN</i>
A 69 P053417	<i>RARG</i>
A 69 P097606	<i>RCN2</i>
A 69 P099007	<i>RMDN3</i>
A 69 P063881	<i>RNF187</i>
A 69 P086261	<i>RNF19B</i>
A 69 P023221	<i>RPS6KA5</i>
A 69 P075576	<i>S100A13</i>
A 69 P035771	<i>SAT2</i>
A 69 P008246	<i>SCCPDH</i>
Probe ID	Gene Symbol
A 69 P107496	<i>SCPEP1</i>
A 69 P012549	<i>SFMBT2</i>
A 69 P078711	<i>SGCE</i>
A 69 P095286	<i>SGMS1</i>
A 69 P090247	<i>SH3KBP1</i>
A 69 P084601	<i>SH3TC1</i>
A 69 P011101	<i>SIPA1</i>
A 69 P048637	<i>SLC17A5</i>
A 69 P100982	<i>SLC25A21</i>

A 69 P084436	<i>SLC2A9</i>
A 69 P069356	<i>SLC37A2</i>
A 69 P022361	<i>SLC38A6</i>
A 69 P034701	<i>SLC46A1</i>
A 69 P074131	<i>SMYD2</i>
A 69 P067081	<i>SOCS6</i>
A 69 P101187	<i>SOS2</i>
A 69 P023156	<i>SPATA7</i>
A 69 P081828	<i>TANGO6</i>
A 69 P079211	<i>TAX1BP1</i>
A 69 P092086	<i>TCEAL4</i>
A 69 P083856	<i>TEC</i>
A 69 P040946	<i>TM9SF2</i>
A 69 P088897	<i>TMEM144</i>
A 69 P098796	<i>TMEM62</i>
A 69 P034669	<i>TMEM97</i>
A 69 P033956	<i>TOM1L1</i>
A 69 P008383	<i>TP53BP2</i>
A 69 P082491	<i>TRHR</i>
A 69 P056860	<i>TRIM71</i>
A 69 P067786	<i>TRIP10</i>
A 69 P110755	<i>UTP18</i>
A 69 P010836	<i>VEGFB</i>
A 69 P015991	<i>WWC2</i>
A 69 P085117	<i>ZCCHC11</i>
A 69 P081097	<i>ZNF423</i>
A 69 P066851	<i>ZNF532</i>
A 69 P013631	<i>ZNF618</i>
A 69 P120141	<i>ZNF711</i>
A 69 P104586	unnamed
A 69 P106116	unnamed
A 69 P108301	unnamed
A 69 P108704	unnamed
A 69 P109000	unnamed
A 69 P109447	unnamed
A 69 P103642	unnamed
A 69 P109977	unnamed
A 69 P110241	unnamed
A 69 P107711	unnamed
A 69 P109436	unnamed
A 69 P110873	unnamed
A 69 P109001	unnamed
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A 69 P111942	unnamed
A 69 P107511	unnamed
A 69 P112333	unnamed
A 69 P112350	unnamed
A 69 P113411	unnamed

A 69 P113744	unnamed
A 69 P113191	unnamed
A 69 P114756	unnamed
A 69 P096792	unnamed
A 69 P106841	unnamed
A 69 P104221	unnamed
A 69 P109611	unnamed
A 69 P108681	unnamed
A 69 P112841	unnamed
A 69 P129691	unnamed
Probe ID	Gene Symbol
A 69 P109276	unnamed
A 69 P008687	unnamed
A 69 P040646	unnamed
A 69 P091166	unnamed
A 69 P084891	unnamed
A 69 P084731	unnamed
A 69 P111125	unnamed
A 69 P117324	unnamed
A 69 P117321	unnamed
A 69 P105842	unnamed
A 69 P109018	unnamed
A 69 P109019	unnamed
A 69 P109016	unnamed
A 69 P109017	unnamed
A 69 P125431	unnamed
A 69 P111121	unnamed
A 69 P111123	unnamed
A 69 P107722	unnamed
A 69 P109020	unnamed
A 69 P111124	unnamed

Gene Name
ATP-binding cassette, sub-family B (MDR/TAP), member 1
ATP-binding cassette, sub-family B (MDR/TAP), member 10
ATP-binding cassette, sub-family G (WHITE), member 2
ADAM metallopeptidase domain 9
adenylate cyclase 10 (soluble)
adenylate cyclase 6
arylformamidase
aldo-keto reductase family 1
aminolevulinate, delta-, synthase 1
aldehyde dehydrogenase 3 family, member A2
aldehyde dehydrogenase 7 family, member A1
aldehyde dehydrogenase 9 family, member A1
annexin A3
Rho GTPase activating protein 12
ADP-ribosylation factor-like 15
aryl hydrocarbon receptor nuclear translocator
argininosuccinate lyase-like
ATPase, class VI, type 11C
ATPase, H ⁺ /K ⁺ transporting, nongastric, alpha polypeptide
ATPase, H ⁺ transporting, lysosomal V0 subunit a4
UDP-GlcNAc:betaGal beta-1,3-N-acetylglucosaminyltransferase 7
basal cell adhesion molecule
basonuclin 2
BOC cell adhesion associated, oncogene regulated
chromosome 1 open reading frame, human C10orf11
chromosome 5 open reading frame, human C1orf21
carbonic anhydrase IV
coiled-coil domain containing 102A
chemokine (C-C motif) ligand 28
ceramide synthase 5
citrate lyase beta like
CNDP dipeptidase 2 (metallopeptidase M20 family)
collagen, type XII, alpha 1
collagen, type I, alpha 2
collagen, type III, alpha 1
collagen, type IV, alpha 1
collagen, type IV, alpha 2
collagen, type IV, alpha 5
carboxypeptidase, vitellogenic-like
chitinase, di-N-acetyl-
cullin 7
CXXC finger protein 5
Dab, mitogen-responsive phosphoprotein, homolog 2 (Drosophila)
2,4-dienoyl CoA reductase 1, mitochondrial
DENN/MADD domain containing 2D
dehydrogenase/reductase (SDR family) member 3
dehydrogenase/reductase (SDR family) member 7
dispatched homolog 1 (Drosophila)
EGF containing fibulin-like extracellular matrix protein 2

ER membrane protein complex subunit 3
enabled homolog (Drosophila)
exostosin glycosyltransferase 1
family with sequence similarity 134, member B
family with sequence similarity 135, member A
Fas-activated serine/threonine kinase
FH2 domain containing 1
follistatin-like 1
ferritin, heavy polypeptide 1
ferritin, light polypeptide
N-acetylglucosamine-6-sulfatase
GRB2-associated binding protein 1
UDP-N-acetyl-alpha-D-galactosamine:polypeptide N-acetylgalactosaminyltransferase 12
galactose-1-phosphate uridylyltransferase
glucosaminyl (N-acetyl) transferase 1, core 2
glycerol kinase
glycine dehydrogenase (decarboxylating)
GM2 ganglioside activator
guanine nucleotide binding protein (G protein), gamma 11
glypican 4
Gene Name
gephyrin
glycoprotein M6A
glycoprotein M6A
GRAM domain containing 1B
general transcription factor II-I repeat domain-containing protein 2-like
heme binding protein 1
3-hydroxyisobutyrate dehydrogenase
homer protein homolog 3
homeobox B3
homeobox C4
hydroxysteroid dehydrogenase like 2
intraflagellar transport protein 20 homolog
insulin-like growth factor 2 mRNA binding protein 2
IKBKB interacting protein
KIAA1958 ortholog
kinesin-associated protein 3
Kirsten rat sarcoma viral oncogene homolog
lamin B1
long intergenic non-protein coding RNA 935
long intergenic non-protein coding RNA 1420
lipopolysaccharide-induced TNF factor
UDP-N-acetylglucosamine/UDP-glucose/GDP-mannose transporter-like
lysyl oxidase-like 1
lysophosphatidic acid receptor 2
lysophosphatidylcholine acyltransferase 4
leucine zipper, putative tumor suppressor 2
melanoma-associated antigen D1-like
Mab-21 domain containing 1
microsomal glutathione S-transferase 3

monoterpene synthase like

mercaptopyruvate sulfurtransferase

muscle RAS oncogene homolog

msh homeobox 2

mitochondrial tRNA translation optimization 1

N-6 adenine-specific DNA methyltransferase 2 (Putative)

N-acetylneuraminic acid pyruvate lyase (dihydrodipicolinate synthase)

nuclear receptor subfamily 2, group F, member 2

diphosphoinositol polyphosphate phosphohydrolase 1

opsin 3

3-oxoacid CoA transferase 1

progesterin and adipoQ receptor family member VIII

uncharacterized LOC100072758

propionyl CoA carboxylase, alpha polypeptide

phosphatidylethanolamine N-methyltransferase

progesterone receptor membrane component 1

phosphatase and actin regulator 1

paired-like homeodomain 1

phospholipase A2, group IVA (cytosolic, calcium-dependent)

phospholipase A2 receptor 1, 180kDa

phospholipase C, delta 3

polo-like kinase 1 substrate 1

peripheral myelin protein 22

paraoxonase 2

peroxiredoxin 1

peroxiredoxin 5

proline rich 5 (renal)

presenilin 2 (Alzheimer disease 4)

protein tyrosine phosphatase-like (proline instead of catalytic arginine), member A

protein tyrosine phosphatase, non-receptor type 13

peroxidase homolog (Drosophila)

retinoic acid receptor, gamma

reticulocalbin 2, EF-hand calcium binding domain

regulator of microtubule dynamics 3

ring finger protein 187

ring finger protein 19B

ribosomal protein S6 kinase, 90kDa, polypeptide 5

S100 calcium binding protein A13

spermidine/spermine N1-acetyltransferase family member 2

saccharopine dehydrogenase (putative)

Gene Name

serine carboxypeptidase 1

Scm-like with four mbt domains 2

sarcoglycan, epsilon

sphingomyelin synthase 1

SH3-domain kinase binding protein 1

SH3 domain and tetratricopeptide repeats 1

signal-induced proliferation associated gene 1

solute carrier family 17 (acidic sugar transporter), member 5

solute carrier family 25 (mitochondrial oxoaliphate carrier), member 21

GenBank ID	R ²	p-value
AY968084	0.72	1.62E-10
JL639550	0.71	4.78E-10
DQ825759	0.76	2.01E-11
JL638583	0.71	3.30E-10
XM_001493753	0.73	1.35E-10
XM_005611135	0.77	5.74E-12
XM_001491048	0.71	3.70E-10
DN507842	0.71	2.90E-10
DN507900	0.77	4.80E-12
XM_005597814	0.71	3.89E-10
JL619152	0.76	1.05E-11
JL637369	0.75	2.50E-11
JL616168	0.74	4.86E-11
XM_005606852	0.76	1.46E-11
XM_001494370	0.72	2.13E-10
-	0.71	5.02E-10
XM_001499711	0.78	2.62E-12
XM_001489612	0.73	1.53E-10
XM_001488499	0.71	3.74E-09
XM_001499288	0.80	4.35E-13
XM_005610796	0.76	1.59E-11
XM_005596693	0.72	1.65E-10
XM_001494292	0.78	4.22E-12
CX603500	0.75	2.67E-11
XM_005602583	0.76	1.55E-11
JL617064	0.79	1.21E-12
XM_001501132	0.78	3.81E-12
XM_005608531	0.76	1.39E-10
-	0.77	8.63E-12
XM_001504248	0.77	5.01E-10
JL620617	0.78	2.95E-12
JL640491	0.79	1.21E-12
CX596341	0.71	4.53E-10
AB070840	0.74	5.57E-11
CX599728	0.78	2.35E-10
XM_005601380	0.78	3.15E-12
XM_005601336	0.74	6.67E-11
-	0.72	2.53E-10
JL616204	0.72	1.77E-10
DN509714	0.80	7.64E-13
XM_001497361	0.77	7.38E-12
XM_001504218	0.82	1.09E-13
CX601958	0.74	5.66E-11
XM_005613191	0.75	2.93E-11
JL615951	0.77	6.95E-12
CX605717	0.76	1.91E-11
XM_005605526	0.82	1.25E-13
XM_005608009	0.85	2.77E-13
CX604872	0.79	9.09E-13

JL639779	0.71	3.70E-10
XM 005607979	0.76	1.04E-11
JL621180	0.71	3.31E-10
CD471498	0.75	3.99E-11
-	0.72	2.08E-10
-	0.71	4.70E-10
XM 001501253	0.77	6.23E-11
XM 001500510	0.80	8.87E-13
NM 001252054	0.72	2.59E-10
NM 001114540	0.74	7.49E-11
JL640617	0.78	4.19E-12
XM 005607919	0.76	1.51E-11
XM 001494943	0.83	5.34E-14
XM 005605071	0.77	7.70E-12
NM 001105534	0.75	2.39E-11
XM 005614054	0.75	3.71E-11
JL638774	0.71	3.99E-10
NM 001081912	0.76	1.05E-11
DN508899	0.77	4.72E-12
XM 001490604	0.71	4.46E-10
GenBank ID	R ²	p-value
XM 005605530	0.74	4.82E-11
XM 001493131	0.76	1.17E-11
XM 001493131	0.77	6.95E-12
CX596508	0.71	3.45E-10
JL624565	0.77	9.24E-12
XM 001496928	0.73	1.48E-10
XM 001499874	0.73	1.05E-10
XM 001915272	0.81	3.51E-13
XM 005597931	0.71	3.72E-10
XM 001916845	0.74	7.84E-11
JL627745	0.75	3.44E-11
JL622550	0.75	2.30E-11
XM 001498883	0.72	2.25E-10
JL621659	0.72	2.38E-10
XM 001916302	0.72	1.87E-10
JL623122	0.73	8.67E-11
JL637310	0.72	2.25E-10
XM 001915319	0.80	5.37E-13
CX604294	0.72	2.50E-10
XR 291118	0.71	4.33E-10
NM 001081861	0.80	4.72E-13
XM 001918037	0.80	8.36E-13
CX605389	0.71	3.73E-10
XM 001500897	0.83	2.11E-12
XM 001503695	0.78	2.55E-12
XM 005602291	0.74	7.47E-11
XM 001914933	0.74	5.26E-11
HQ890007	0.71	3.38E-10
JL633922	0.73	1.48E-10

BI961300	0.70	5.71E-10
CX605060	0.77	6.95E-12
XM 001495753	0.76	1.24E-11
XM 001502790	0.70	6.60E-10
JL638553	0.72	2.58E-10
XM 005601086	0.75	2.29E-11
JL616166	0.78	3.18E-12
-	0.74	5.99E-11
CD467913	0.72	1.56E-10
XM 005607945	0.72	2.55E-10
JL624520	0.79	1.31E-12
NM 001256979	0.72	2.58E-10
CX605371	0.73	1.09E-10
CX597325	0.78	2.48E-12
XM 005597841	0.81	2.74E-13
JL618515	0.72	2.82E-10
CX593044	0.74	4.92E-11
XM 001502726	0.72	1.75E-10
NM 001081843	0.79	1.72E-12
XM 005601532	0.72	2.82E-10
XM 005597910	0.78	2.05E-11
XM 005604442	0.75	2.11E-11
CX603423	0.75	2.59E-11
JL630262	0.73	1.26E-10
JL616268	0.73	1.03E-10
DN510527	0.70	7.07E-10
XM 005606771	0.79	1.03E-12
CX597312	0.73	1.24E-10
XM 005606902	0.75	2.54E-11
JL630197	0.81	3.52E-13
CX600473	0.75	2.80E-11
CX594031	0.70	6.08E-10
JL641653	0.81	1.39E-11
JL619587	0.72	2.09E-10
CX594179	0.78	3.19E-12
JL638196	0.78	2.46E-10
JL624533	0.73	1.39E-10
CX601420	0.75	3.21E-11
XM 001504785	0.74	6.41E-11
JL620041	0.72	1.76E-10
GenBank ID	R ²	p-value
JL634101	0.79	1.33E-12
DN504681	0.70	2.67E-08
XM 001493182	0.78	2.35E-12
JL638632	0.78	4.40E-12
JL620247	0.80	5.01E-13
XM 001917720	0.77	7.18E-12
XM 005598457	0.74	4.12E-11
XM 001498010	0.74	5.38E-11
XM 001492015	0.71	3.33E-10

XM 005609007	0.71	3.23E-09
XM 005611677	0.80	4.10E-13
JL640035	0.70	6.87E-10
XM 001504128	0.70	6.94E-10
JL619709	0.71	1.93E-08
NM 001256934	0.76	1.67E-11
JL639342	0.75	3.44E-11
XM 005605388	0.77	7.35E-12
JL623648	0.74	7.56E-11
HQ889953	0.72	1.61E-10
CX594436	0.78	2.08E-11
XM 001493341	0.72	2.44E-10
XM 001492116	0.77	7.41E-12
XM 001500487	0.74	7.45E-11
XM 001918264	0.70	5.89E-10
XM 001504111	0.70	5.72E-10
XM 001500172	0.73	8.27E-11
XM 001488077	0.74	5.85E-11
XM 001487946	0.73	1.31E-10
-	0.71	3.57E-10
XM 003365319	0.70	5.68E-10
CX603349	0.78	4.44E-12
CX604717	0.80	5.62E-13
XM 001491748	0.71	4.95E-10
XM 005607057	0.76	1.79E-11
XM 001491336	0.72	2.02E-10
XM 005613004	0.72	2.71E-10
XM 005605731	0.79	1.44E-12
XM 005614309	0.70	6.80E-10
CD470904	0.78	4.60E-12
CX592986	0.80	6.36E-13
CX597336	0.78	3.02E-12
CX598306	0.74	4.83E-11
CX599166	0.82	9.67E-12
CX600696	0.76	1.60E-11
CX601207	0.74	5.71E-11
CX601829	0.74	6.36E-11
CX602433	0.74	6.90E-11
CX602898	0.76	1.76E-11
CX603424	0.74	5.57E-11
CX603684	0.72	1.71E-10
CX603852	0.79	1.34E-12
CX603926	0.74	5.30E-11
CX604537	0.79	9.50E-13
CX605567	0.70	6.73E-10
CX605640	0.75	2.07E-11
CX605686	0.72	2.32E-10
DN504741	0.71	4.80E-10
DN504773	0.80	3.00E-11
DN508478	0.72	2.25E-10

DN509048	0.72	2.15E-10
DN509651	0.80	6.68E-13
DN510939	0.79	1.77E-12
JL615891	0.74	5.36E-11
JL620022	0.75	3.16E-10
JL621523	0.76	1.64E-11
JL627750	0.78	2.26E-12
JL637774	0.79	1.15E-12
JL638219	0.80	6.83E-13
JL640507	0.76	1.03E-11
GenBank ID	R²	p-value
JL640768	0.70	4.26E-09
XM_001493132	0.73	1.24E-10
XM_001494440	0.75	3.00E-11
XM_001496045	0.71	4.07E-10
XM_005615163	0.76	1.78E-11
XR_290081	0.74	5.26E-11
-	0.80	5.21E-13
-	0.77	3.09E-10
-	0.78	2.63E-10
-	0.70	6.49E-10
-	0.79	1.12E-12
-	0.79	1.24E-12
-	0.80	6.24E-13
-	0.79	9.09E-13
-	0.74	5.54E-11
-	0.81	2.17E-13
-	0.81	2.34E-13
-	0.71	4.96E-10
-	0.80	8.37E-13
-	0.79	1.25E-12

Probe ID	Gene Symbol
A 69 P035566	<i>ALOX12</i>
A 69 P016397	<i>APP</i>
A 69 P000361	<i>ARNTL</i>
A 69 P103068	<i>BCL3</i>
A 69 P013711	<i>BRINP1</i>
A 69 P068376	<i>C7H11orf52</i>
A 69 P068177	<i>CASP4</i>
A 69 P042141	<i>CCDC173</i>
A 69 P015541	<i>DUSP26</i>
A 69 P002656	<i>IGFBP-5</i>
A 69 P120221	<i>LOC100050711</i>
A 69 P106112	<i>LOC100051103</i>
A 69 P000282	<i>MAOB</i>
A 69 P060526	<i>OSR1</i>
A 69 P044182	<i>OSR2</i>
A 69 P083756	<i>PDGFRA</i>
A 69 P084922	<i>PPAP2B</i>
A 69 P088246	<i>PPP3CC</i>
A 69 P095431	<i>RHOBTB1</i>
A 69 P012799	<i>RUSC2</i>
A 69 P000931	<i>SLC26A2</i>
A 69 P075757	<i>THEM4</i>
A 69 P057866	<i>UXS1</i>
A 69 P104266	<i>ZEB1</i>
A 69 P066321	<i>ZNF521</i>
A 69 P106667	unnamed
A 69 P107057	unnamed
A 69 P107556	unnamed
A 69 P106469	unnamed
A 69 P109735	unnamed
A 69 P107896	unnamed
A 69 P110126	unnamed
A 69 P107467	unnamed
A 69 P111651	unnamed
A 69 P109600	unnamed
A 69 P111846	unnamed
A 69 P106994	unnamed
A 69 P001871	unnamed
A 69 P117454	unnamed
A 69 P102788	unnamed
A 69 P103703	unnamed
A 69 P022791	unnamed
A 69 P106887	unnamed
A 69 P049831	unnamed
A 69 P049836	unnamed
A 69 P068696	unnamed
A 69 P114281	unnamed
A 69 P116441	unnamed
A 69 P116443	unnamed

A 69 P116445	unnamed
A 69 P107286	unnamed
A 69 P116442	unnamed
A 69 P122841	unnamed
A 69 P127661	unnamed
A 69 P116444	unnamed
A 69 P127662	unnamed

For Review Only

Gene Name	GenBank ID	R ²
arachidonate 12-lipoxygenase	XM_001502998	0.78
amyloid beta (A4) precursor protein	JL622275	0.77
aryl hydrocarbon receptor nuclear translocator-like	NM_001081921	0.71
B-cell CLL/lymphoma 3	XM_005614808	0.72
bone morphogenetic protein/retinoic acid inducible neural-specific 1	-	0.78
chromosome 7 open reading frame, human C11orf52	XM_001916879	0.71
caspase 4, apoptosis-related cysteine peptidase	JL616394	0.71
coiled-coil domain containing 173	DN510576	0.75
dual specificity phosphatase 26 (putative)	XM_005606332	0.72
insulin-like growth factor binding protein-5	XM_001490309	0.75
granzyme B-like	XM_001915586	0.70
paternally-expressed gene 3 protein-like	XM_003362242	0.82
monoamine oxidase B	NM_001081833	0.71
odd-skipped related 1 (Drosophila)	XM_005600194	0.79
odd-skipped related 2 (Drosophila)	XM_001491780	0.70
platelet-derived growth factor receptor, alpha polypeptide	-	0.75
phosphatidic acid phosphatase type 2B	BM780291	0.72
protein phosphatase 3, catalytic subunit, gamma isozyme	JL617911	0.71
Rho-related BTB domain containing 1	XM_005602395	0.76
RUN and SH3 domain containing 2	XM_005605586	0.76
solute carrier family 26 (sulfate transporter), member 2	NM_001081934	0.70
thioesterase superfamily member 4	CX600122	0.71
UDP-glucuronate decarboxylase 1	JL627260	0.77
zinc finger E-box binding homeobox 1	JL638232	0.79
zinc finger protein 521	-	0.71
-	CX593782	0.75
-	CX594481	0.72
-	CX597536	0.83
-	CX601259	0.77
-	CX601386	0.72
-	CX601823	0.74
-	CX602135	0.79
-	CX603428	0.73
-	CX605142	0.71
-	CX605267	0.73
-	CX605460	0.72
-	CX605486	0.73
-	CX605854	0.73
-	DN504897	0.72
-	DN505574	0.78
-	JL622155	0.74
-	JL624361	0.77
-	JL626010	0.72
-	XM_001504298	0.80
-	XM_005596932	0.79
-	XM_005611811	0.76
-	-	0.72
-	-	0.72
-	-	0.74

-	-	0.71
-	-	0.77
-	-	0.70
-	-	0.77
-	-	0.76
-	-	0.73
-	-	0.78

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p-value
3.43E-11
8.01E-11
2.36E-09
2.02E-09
2.16E-11
3.42E-09
3.70E-09
1.99E-10
1.81E-09
2.75E-11
4.96E-09
1.42E-12
3.17E-10
1.09E-11
4.33E-09
3.27E-10
1.65E-10
2.21E-09
1.02E-10
1.41E-10
4.67E-09
3.26E-09
4.77E-11
1.89E-11
3.53E-10
3.27E-10
1.42E-09
2.45E-13
6.29E-11
1.45E-09
5.97E-11
1.34E-10
1.07E-10
2.85E-09
7.86E-10
1.71E-10
7.66E-10
1.11E-09
2.15E-09
1.90E-11
4.33E-10
6.56E-11
1.98E-09
8.49E-12
1.00E-11
1.50E-10
1.43E-09
2.21E-11
3.85E-12

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4.09E-11
4.51E-11
5.44E-11
6.57E-11
1.24E-10
9.06E-12
3.80E-11

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Probe ID	Gene Symbol	Gene Name
A 69 P094541	<i>ARL3</i>	ADP-ribosylation factor-like 3
A 69 P019426	<i>ATF7IP2</i>	activating transcription factor 7 interacting protein 2
A 69 P077216	<i>CCBL2</i>	cysteine conjugate-beta lyase 2
A 69 P065626	<i>CDK2AP1</i>	cyclin-dependent kinase 2 associated protein 1
A 69 P008591	<i>GLRX2</i>	glutaredoxin 2
A 69 P086331	<i>MARCKSL1</i>	MARCKS-like 1
A 69 P085926	<i>NDUFS5</i>	NADH dehydrogenase (ubiquinone) Fe-S protein 5, 15kDa
A 69 P061392	<i>NPM1</i>	nucleophosmin (nucleolar phosphoprotein B23, numatrin)
A 69 P079036	<i>TOMM7</i>	translocase of outer mitochondrial membrane 7 homolog (yeast)
A 69 P032976	<i>TUBG1</i>	tubulin gamma-1 chain-like
A 69 P111806	unnamed	-
A 69 P115366	unnamed	-
A 69 P117031	unnamed	-

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GenBank ID	R²	p-value
DN504131	0.75	1.49E-09
XM_005598924	0.71	2.00E-08
JL617536	0.72	1.06E-08
DN505745	0.73	6.71E-09
CX603123	0.72	9.77E-09
XM_001499925	0.72	1.22E-08
XM_001503511	0.72	9.05E-09
JL616285	0.74	3.12E-09
DN504324	0.73	4.69E-09
XM_001493847	0.73	5.42E-09
CX605375	0.79	1.07E-10
CD470074	0.73	6.71E-09
CX598579	0.71	1.69E-08

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