

1  
2  
3

## SI-Guide

	<b>Title</b>	<b>Page</b>
<b>Supplementary Discussion</b>		
	DarT's position in the ART family	<b>3</b>
	Mode of NAD <sup>+</sup> binding by DarT	<b>4</b>
	The catalytic mechanism of DarT	<b>5</b>
	NMR analysis of DarT ADP-ribosylated DNA	<b>6</b>
<b>Supplementary Figure 1</b>	Uncropped figure data of	
Supplementary Figure 1-1	Protein immunoblots shown in the manuscript.	<b>7</b>
Supplementary Figure 1-2	Dot blot assays shown in the manuscript.	<b>8</b>
Supplementary Figure 1-3	Activity assays shown in the manuscript.	<b>9</b>
<b>Supplementary Figure 2</b>	NMR analysis of ADP-ribosylated DNA	
Supplementary Figure 2-1	Identification of ribose resonances attached to DNA strand.	<b>10</b>
Supplementary Figure 2-2	Identification of the ribose-thymine connectivity and its stereo configuration.	<b>11</b>
<b>Supplementary Figure 3</b>	ITC results for determining binding parameters for <i>Thermus</i> sp. 2.9 DarT E160Q to NAD <sup>+</sup> and ADPr-DNA.	<b>12</b>
<b>Supplementary Figure 4</b>	Comparison of N-glycosidic ADPr-linkages catalysed by ARTs.	<b>12</b>
<b>Supplementary Table 1</b>	DarT substrate oligonucleotides used in this study.	<b>13</b>
<b>Supplementary Table 2</b>	Primer sequences used for experimental procedures.	<b>14</b>
<b>Supplementary Table 3</b>	Strains and plasmids used in this study.	<b>15</b>
<b>Supplementary Dataset 1</b>	RNA-Seq Differential Expression Analysis	<b>Separate Excel File</b>
<b>Supplementary References</b>	---	<b>17</b>

4  
5