

**Table 1S. Crystallization conditions of Sac7d mutant-DNA complexes**

	<b>V26A GCGATCGC</b>	<b>V26A GTAATTAC</b>	<b>M29A GCGATCGC</b>	<b>M29A GTAATTAC</b>	<b>V26AM29A GCGATGCC</b>	<b>M29F GCGAU<sup>br</sup>CGC</b>	<b>M29F GTAATTAC</b>	<b>V26F/M29F GCGATCGC</b>
<b>Protein conc.</b>	0.7 mM	0.8 mM	0.9 mM	0.8 mM	0.8 mM	0.8 mM	0.8 mM	0.8 mM
<b>DNA conc.</b>	2.5 mM	2.5mM	2.5 mM	2.5 mM	3.3 mM	2.5 mM	2.5 mM	2.5 mM
<b>Buffer</b>	5 mM Tris-Cl pH 7.0	5 mM Tris-Cl pH 7.0	5 mM Tris-Cl pH 7.0	5 mM Tris-Cl pH 7.0	5 mM Tris-Cl pH 7.0	5 mM Tris-Cl pH 7.0	5 mM Tris-Cl pH 7.0	5 mM Tris-Cl pH 7.0
<b>Precipitator</b>	7.5% PEG400	6% PEG400	6.5% PEG400	7.5% PEG400	5% PEG400	10% PEG400	8% PEG400	4% PEG400
<b>Reservoir</b>	20% PEG400	15% PEG400	30% PEG400	30% PEG400	20% PEG400	20% PEG400	25% PEG400	15% PEG400