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**Supplemental Information**

**Assembly and Translocation**

**of a CRISPR-Cas Primed Acquisition Complex**

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**Table S1. Oligonucleotide used in this study, Related to STAR Methods**

Oligonucleotide	Sequence
IF001	/5Phos/GGGCGGCGACCT/3BioTEG
IF002	/5Phos/AGGTCGCCGCC/3Dig_N
IF003	/5Phos/AGGTCGCCGCC/3BioTEG
IF004	/5Phos/GGGCGGCGACCT/3Dig_N
MB069	GGAGGCATGGCCAAGCTCGTCATG
MB070	TCCGCCGGATCCACCAATCTGTTCTC
MB073	AGGGGGCAGCGGAGGATCTGCATGGAGCCACCCCAATTC GAGAAATGAGATCCGGCTGCTAACAAAGC
MB074	CCAGAGCCTCCCCCTTCTCAAAGTGC GGATGCGACCAAGC GGAGCCGCCGGTTTCCGGCAGGTG
MB075	/5Phos/CGCCTAGAAAAGCGTGCGCAGAAGCGTGGAAGGA AAG
MB076	/5Phos/ACGGGCCATATGGGCGGACCTCGACGCC
MB077	/5Phos/GTGACCTGGGCGTGGGCGGAACGCAACATTTC
MB078	/5Phos/CCGTGTCTATCCGGCGCCAGCCGAAGCG
MB079	/5Phos/GAACTCGACCCTTACCGCATCTACCAGACAAGC
MB080	/5Phos/CAACAGCCCTAGGTCCACTAGCCGCGGCACCAACGC
MB101	/5Phos/CAGCGGGGAGGATTCCC CGGGGGTCCGCCGGCTG CTTCTTTGGCGA
CJ1	Cy5- AATGATACGGCGACCACCGAGA
CJ2	GTGACTGGAGTTCAGACGTGT
NJ020	CCAAGGTATTCAAGCACCGCTGAGCAATAACTAGC
NJ021	GGCCGGTGAGAATTCGGCCTTGCAGCAGCCTAGGTTAATT AAGCTGC
NJ022	ACTTTAATAAGGAGATATACTTTTGTTTAACTTTAAGAAGG AGATATAACCAT
NJ027	ACTTTAATAAGGAGATATACCCCCTCTAGAAATAATTTTGT TTAACTTTAAGAAG
NJ032	GGATCCTGGCTGTGGTGAT
NJ034	GCGGCCGCATAATGCTTAA
KD055	GGGCTCCTCGCTGTCCGC
KD056	TGACTCGAGTCTGGTAAAGAAACCG
KD057	TCGCGGACAGCGAGGAGCCCATGGTGAGCAAGGGCGAG
KD058	TCTTTACCAGACTCGAGTCAGGCGGTGATATAGACGTTGTG
KD059	CGCGGCTTCCTTGTCCTG
KD060	TGAATGAACAGCGACTAC
KD061	AACAGGACAAGGAAGCCGCGGACAAGCAGAAGAACGGC
KD062	ATGTAGTCGCTGTTCACTTCACTTGTACAGCTCGTCCATG
Q5SDM_11/11/2 015_F	GGAGGCCTGTCCGGTTGCCCTGTGT
Q5SDM_11/11/2 015_R	TCCGCCTCCACCAATCTGTTCTCTGTG

**Table S2. Plasmids used in this study, Related to STAR Methods.**

Plasmid	Description	Primers	Source
pIF165	pBkan crRNA array (Target A)	N/A	(Huo et al., 2014)
pIF199	pET28b Cas3 twin-strep HRV tag on N-terminus	N/A	(Huo et al., 2014)
pIF385	pBAD WT Cascade	N/A	(Huo et al., 2014)
pIF396	pCDF-Duet1 Cascade Target A + Target 2	NJ020 & NJ021	This study
pIF397	pBAD Cascade Cse1(mVenusC)	KD059, KD060, KD061, KD062	This study
pIF398	pACYC Duet1 Cas1(mVenusN)-Cas2	KD055, KD056, KD057, KD058	This study
pIF400	pACYC Duet1 crRNA array (Target 2)	N/A	(Huo et al., 2014)
pIF401	pBAD Cascade Cse1(3R); L319R, S454R, S458R	MB79 & MB80	This study
pIF402	pBAD Cascade Cse1(5A); R307A, R332A, R338A, R342A, K444A	MB75, MB76, MB77, MB78	This study
pIF405	pBAD Cascade Cse1 (5A); R307A, R332A, R338A, R342A, K444A Cas7; K144A, K145A, K148A	MB75, MB76, MB77, MB78, MB101	This study
pIF408	pBAD Cascade Cas7; K144A, K145A, K148A	MB101	This study
pIF412	pCDF-Duet1 Cascade Target 2	N/A	(Huo et al., 2014)
pIF414	pRSF Cas3-crRNA (Target A)	NJ022 & NJ027	This study
pIF431	pACYC Duet1 Cas1(mVenus)	NJ032 & NJ034	This study
pIF291	pET19 Cse1 3R	MB79 & MB80	This study
pIF292	pET19 Cse1 5A	MB75, MB76, MB77 & MB78	This study
pIF212	pET-28 a (+) Cas2 with Sortase Epitope	MB069 & MB070	This study
pIF218	pET-28 b (+) Cas3 with Sortase Epitope	MB073 & MB074	This study
pIF181	pET19 Cse1 with Sortase Epitope	Q5SDM_11/11/2015_F & Q5SDM_11/11/2015_R	This study
pIF201	pET-28 a (+) Cas1	N/A	This study
pIF202	pET-28 a (+) Cas2	N/A	This study
pIF199	pET-28 b (+) Cas3	N/A	(Huo et al., 2014)
pIF163	pET19b Cse1	N/A	(Huo et al., 2014)
pIF164	pCDF-Duet1 Cascade B-E 3xFLAG	N/A	(Jung et al., 2017)

pIF165	pRSF crRNA	N/A	(Huo et al., 2014)
pIF392	pBAD Venus	N/A	(Nagai et al., 2002)