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Mechanistic and evolutionary insights into a type V-M CRISPR–Cas effector enzyme

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Supplementary Information for

Mechanistic and evolutionary insights into a type V-M CRISPR-Cas effector enzyme

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Supplementary Table 1. Nucleic-acid sequences used for structural analysis

Primers used in this study.	
Oligo	Sequence
RNA-T7-f	GGATCCTAATACGACTCACTATAGG
crRNA-r	GCCACGCGCACCTCATCTCCGTCTTGGCCTTCGCCCGCCAAGCTGGGCTATGACACCCTATAGTGAGTCGTA TTAGGATCC
Target DNA sequences used for the structural determination	
Target DNA strand	GATGGTGCCACGCGCACCTCATCTCCCAAATAGACA
Non-target DNA strand	TGTCTATTTGGGAGATGAGGTGCGCGTGGCACCATC

Supplementary Table 2. Oligonucleotides used for biochemical analysis.

Oligo ID	Sequence	Comment
BG29176	/5Phos/GGGCAATATTGCCGAGATGGA	FW for amplification of pML-1B-Cas12m2-Y141A
BG29177	agcCAGTGCCTTCTGATCTGCT	RV for amplification of pML-1B-Cas12m2-Y141A
BG29178	/5Phos/GCATCGTTTAATACAGTACTGG	FW for amplification of pML-1B-Cas12m2-W152A
BG29179	agcATACAGATCTCCATCTCG	RV for amplification of pML-1B-Cas12m2-W152A
BG29180	/5Phos/ACAGTACTGGATCACCATAA	FW for amplification of pML-1B- Cas12m2-N156A
BG29181	agcAAACGATGCCCAATACAG	RV for amplification of pML-1B-Cas12m2-N156A
BG29182	/5Phos/CTGCAGCGGCAGGCAGG	FW for amplification of pML-1B-Cas12m2-Q195A
BG29183	agcTACTGCAATTGTTCCCGATCCGTCA	RV for amplification of pML-1B-Cas12m2-Q195A
BG29184	/5Phos/CGGCAGGCAGGGGCACC	FW for amplification of pML-1B-Cas12m2-Q197A
BG29185	agcCAGCTGTACTGCAATTGTTCCCGAT	RV for amplification of pML-1B-Cas12m2-Q197A
BG29186	/5Phos/CGGGATGCAATTGCAGTTGT	FW for amplification of pML-1B-Cas12m2-R111A
BG29187	agcTGCTTGCCGGGCATCTTTT	RV for amplification of pML-1B-Cas12m2-R111A
BG29188	/5Phos/GATGCAATTGCAGTTGTAAAGGA	FW for amplification of pML-1B-Cas12m2-R112A
BG29189	agcCCGTGCTTGCCGGGCATCTTTTA	RV for amplification of pML-1B-Cas12m2-R112A
BG29190	/5Phos/AAGGCACGGTCGGATCAATTAGC	FW for amplification of pML-1B-Cas12m2-R126A and pML-1B-Cas12m2-R111A-R112A-R126A
BG29191	agcCCGTTCGGCTGCGTCATC	RV for amplification of pML-1B-Cas12m2-R126A
BG29192	agcCCGTTCGGCTGCGTCATCCTTTACAACTGCAATTGCATCagcagc TGCTTGCCGGGCATCTTTTAAC	RV for amplification of pML-1B-Cas12m2-R111A-R112A-R126A
BG30296	TACTGCTCTTCCATGACAACAATGACAGTACATACAATGGG	FW for amplification of inserts from pML-1B-Cas12m2-[x] for assembly of pCas-Cas12m2-[x]
BG30297	TACTGCTCTTCCcttCTAGGGGTTCGAGGGGGCAG	RV for amplification of inserts from pML-1B-Cas12m2-[x] for assembly of pCas-Cas12m2-[x]
BG30298	TACTGCTCTTCCtagaagcttggctgttttggc	FW for amplification of backbone from pCas-Cas12m2 for assembly of pCas-Cas12m2-[x]
BG30313	TACTGCTCTTCCCATGATGTCCTCCTgagctcgc	RV for amplification of backbone from pCas-Cas12m2 for assembly of pCas-Cas12m2-[x]
BG16529	GUGUCAUAGCCCAGCUUGGCGGGCGAAGGCCAAGACGUCGAGU GCAAAACCUUUCG	Cas12m PAM-SCNR RNA for SPR
BG27342	GUGUCAUAGCCCAGCUUGGCGGGCGAAGGCCAAGACUGGUCUU CGCAUCUUGCCGU	Cas12m NT RNA for SPR
	5'bio-CAGCTATAGTTCTCGAAAGGTTTTGCACTCGACTAAAGGACTCTA TGACC	Biotinylated top strand with target site for SPR dsDNA
	5'GGTCATAGAGTCCTTTAGTCGAGTGCAAAACCTTTCGAGAACT ATAGCTG	Bottom strand for SPR dsDNA