

SUPPLEMENTAL INFORMATION

Domain interactions control complex formation and polymerase specificity in the biosynthesis of the *Escherichia coli* O9a antigen

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Table S1. Sequences of oligonucleotide primers used to generate site-directed mutants and recombinant plasmids.

Plasmid	Primer	Sequence ^{a,b,c} (5'→3')	Features
pWQ766	LG33	gatgaattcaccatgcatcatcatcatcatc atcatcatCATATTTTGATTGATGT CCAGGG	Forward primer for the amplification of His ₁₀ - <i>wbdA</i> ¹⁻¹³⁰⁵ ; <i>EcoRI</i> restriction site
	LG34	gatcaagcttttaTTCGCTCAGCGCAT CGATTTTCTGC	Reverse primer for the amplification of <i>wbdA</i> ¹⁻¹³⁰⁵ ; <i>HindIII</i> restriction site
pWQ769	WbdAE317AFwd	GTGTTCCCGTCGCTGCATGCA GGTTTCGGCC	Forward primer used to generate E317A mutation in His ₁₀ -WbdA
	WbdAE317AFwd	GCGGCAGGCCGAAACCTGCA TGCAGCGACG	Reverse primer used to generate E317A mutation in His ₁₀ -WbdA
pWQ770	SL001	CAACTTTCATCTGGGATAACT <u>CGAGGATGCCAGCGTACCG</u>	Forward primer used to introduce non-sense mutation and <i>XhoI</i> restriction site in <i>wbdA</i> after codon 635.
	SL002	CGGTACGCTGGCATCCTCGA <u>GTTATCCCAGATGAAAGTTG</u>	Reverse primer used to introduce non-sense mutation and <i>XhoI</i> restriction site in <i>wbdA</i> after codon 635.
pWQ771	SL005	GTGGTGCATGATATTTAACTC <u>GAGCGCCGTCGGAGTGG</u>	Forward primer used to introduce non-sense mutation and <i>XhoI</i> restriction site in <i>wbdA</i> after codon 568.
	SL006	CCACTCCGGACGGCGCTCGA <u>GTAAATATCATGCACCAC</u>	Reverse primer used to introduce non-sense mutation and <i>XhoI</i> restriction site in <i>wbdA</i> after codon 568.
pWQ772	SL071	CATCTCTTCCCGGAGCTGTAA <u>CTCGAGATTGACAGCATGCG</u> CGCC	Forward primer used to introduce non-sense mutation and <i>XhoI</i> restriction site in <i>wbdA</i> after codon 547.
	SL072	GGCGCGCATGCTGTCAATCTC <u>GAGTTACAGCTCCGGGAAGA</u> GATG	Reverse primer used to introduce non-sense mutation and <i>XhoI</i> restriction site in <i>wbdA</i> after codon 547.
pWQ773	SL069	GGTGCTGACGAACCGGTGTA <u>ACTCGAGAGACGATGTGCTT</u> ATTGCC	Forward primer used to introduce non-sense mutation and <i>XhoI</i> restriction site in <i>wbdA</i> after codon 526.
	SL070	GGCAATAAGCACATCGTCTCT <u>CGAGTTACACCGTTCGTCA</u> GCACC	Reverse primer used to introduce non-sense mutation and <i>XhoI</i> site in <i>wbdA</i> after codon 526.
pWQ774	SL003	CTACTACACCCTGGCTAACTC <u>GAGCGCTACGCCAACC</u>	Forward primer used to introduce non-sense mutation and <i>XhoI</i> restriction site in <i>wbdA</i> after codon 502.

	SL004	GGTTGGCGTAGCGCTCGAGT TAGCCAGGGGTGTAGTAG	Reverse primer used to introduce non-sense mutation and <i>Xho</i> I restriction site in <i>wbdA</i> after codon 502.
pWQ775	SL012	gatctctagagATGCATATTTTGATT GATGTCCAGGG	Forward primer used for the amplification of <i>wbdA</i> ¹⁻¹⁹⁰⁵ and cloning into pUT18C; <i>Xba</i> I restriction site
	SL022	gatcgaattcttaTCCCAGATGAAAG TTGCTG	Reverse primer for the amplification of <i>wbdA</i> ¹⁻¹⁹⁰⁵ and cloning into pUT18C; <i>Eco</i> RI restriction site
pWQ776	SL012	gatctctagagATGCATATTTTGATT GATGTCCAGGG	Forward primer for the amplification of <i>wbdA</i> ¹⁻¹⁷⁰⁴ and cloning into pUT18C; <i>Xba</i> I restriction site
	SL015	gatctctagaccAATATCATGCACC ACGAAG	Reverse primer for the amplification of <i>wbdA</i> ¹⁻¹⁷⁰⁴ and cloning into pUT18C; <i>Eco</i> RI restriction site
pWQ777	SL012	gatctctagagATGCATATTTTGATT GATGTCCAGGG	Forward primer for the amplification of <i>wbdA</i> ¹⁻¹⁶⁴¹ and cloning into pUT18C; <i>Xba</i> I restriction site
	SL075	gatcgaattcttaCAGCTCCGGGAAG AGATG	Reverse primer used for the amplification of <i>wbdA</i> ¹⁻¹⁶⁴¹ and cloning into pUT18C; <i>Eco</i> RI restriction site
pWQ778	SL012	gatctctagagATGCATATTTTGATT GATGTCCAGGG	Forward primer for the amplification of <i>wbdA</i> ¹⁻¹⁵⁷⁸ and cloning into pUT18C; <i>Xba</i> I restriction site
	SL073	gatcgaattcttaCACCGGTTTCGTCA GCACC	Reverse primer for the amplification of <i>wbdA</i> ¹⁻¹⁵⁷⁸ and cloning into pUT18C; <i>Eco</i> RI restriction site
pWQ779	SL012	gatctctagagATGCATATTTTGATT GATGTCCAGGG	Forward primer for the amplification of <i>wbdA</i> ¹⁻¹⁵⁰⁶ and cloning into pUT18C; <i>Xba</i> I restriction site
	SL016	gatctctagaccGCCAGGGGTGTAG TAGACGG	Reverse primer for the amplification of <i>wbdA</i> ¹⁻¹⁵⁰⁶ and cloning into pUT18C; <i>Eco</i> RI restriction site
pWQ780	LG79	gatcgatctagagATGCATATTTTGA TTGATGTCCAGGG	Forward primer for the amplification of <i>wbdA</i> ¹⁻¹³⁰⁵ and cloning into pUT18C; <i>Xba</i> I restriction site

	LG80	<u>gatcgaattctta</u> TTCGCTCAGCGCAT CGATTTTCTGC	Reverse primer for the amplification of <i>wbdA</i> ¹⁻¹³⁰⁵ and cloning into pUT18C <i>EcoRI</i> restriction site
pWQ781	LG81	<u>gatcgatctagag</u> ATGCAGAAAATC GATGCGCTGAGCG	Forward primer for the amplification of <i>wbdA</i> ¹²⁷⁹⁻²⁵²⁰ and cloning into pUT18; <i>XbaI</i> restriction site
	SL014	<u>gatcgaattcga</u> TTGCTTCGCGGCTG GCGCG	Reverse primer for the amplification of <i>wbdA</i> ¹²⁷⁹⁻²⁵²⁰ and cloning into pUT18; <i>EcoRI</i> restriction site

^aRestriction sites are underlined.

^bNon-chromosomal sequences are lowercase.

^cPoint mutations are bolded.