

**Table S1 Primers used for construction of deletion mutant phages in this study.**

Phage mutant	Primer 1 (5'-3')	Primer 2 (5'-3')	Primer 3 (5'-3')
<i>ΔmodA</i>	GACTCCCAAGCTTGCGCC TTCTGCTATG	GGATGCATCGGTGCGTGCTTCTATTCGGA AGTAATGATACCAGCTGGAAGTG	ATCTTGACAGATGTTGAACA GT
<i>Δsrd</i>	ACGCGTCGACTCATCGTA AATTC	CGTTTAGAGCATACTCAGGCATCTGCCTGA AAAGAGGATATCCGCTAAATTG	ACGCGTCGACATTGAGGT AGTTG
<i>Δdda-dda.1</i>	ACGCGTCGACTTATCGTT TTGTTG	GCGATAGTTTACCGAGACAAAGACGGTGT CACCCGTGGTTCGTTATGATGTG	ACGCGTCGACGTAAGATG TGAGAA
<i>ΔdexA.1-dexA.2</i>	ACGCGTCGACTTATCGTT TTGTTG	GGAAGCTATTCGTGGAAATAACTAAAGAG GTCAAATTCGTGATTTAGCGAGG	ACGCGTCGACCAATTGCA GGGAAT
<i>ΔdexA</i>	ACGCGTCGACTTAGTTTA AGGTA	GGGAAGTGGTGAAAAAGCAGCGGTTGGG TCTTGAAGATGCTCCATCAGAGG	ACGCGTCGACAAATTTGA GGAAG
<i>ΔmotB.2</i>	TCAACGCCATCTTCCAAT CCAT	GACGCTATAACAATACGCCGAGATCTTGG CGGGCATCAAGTAATGTTCCG	GTACCGGAATCCGATGA ATTAGTTTC