

Table S1. Primers in this study.

Plasmid	Primer Sequence (5'→ 3')
Primers for <i>hasA</i> deletion constructs	
<i>hasA</i> up <i>Bam</i> HI For	CCC <u>GGATCC</u> TGTTTCCTTAATAAATAGTGTGAT
<i>hasA</i> up <i>Pst</i> I Rev	CCC <u>CTGCAG</u> TAAAGTTTTTTTTAAAAATAGGCACAATTACACC
<i>hasA</i> down <i>Pst</i> I For	CCC <u>CTGCAG</u> AAAAAGGTCACTATTTTTAAATAATATATGCATCGAG
<i>hasA</i> down <i>Kpn</i> I Rev	CCC <u>GGTACC</u> TTCACAAGAAACAATAATTCGGCTTGG
Primers for sequencing and screening	
M13 For	GTAAAACGACGGCCAG
M13 Rev	GTCATAGCTGTTTCCTG
<i>hasA</i> Screen For	CTCTAAACTGCCTAACAGTTGGATAAACACTC
<i>hasA</i> Screen Rev	GTGCAAATTTTTCTGCGTCTGCC
Primers for generating complements	
<i>hasA</i> Comp <i>Xho</i> I For	CCC <u>CTCGAG</u> GGGTGAAGTTTTTTAATGGAAGCAC
<i>hasA</i> Comp <i>Spe</i> I Rev	CCC <u>ACTAGTG</u> AGGGAAGAATATCAACAATAGTGACTIONCG

¹Restriction sites (indicated in the primer name) are underlined in the primer sequence