

Table S1: Primers used for PCR amplification

Primer Name	Sequence (5'-3')*	Target Sequences
FW2062BamHI	AAGCTAGGATCCAACGACGCCGACTGA	700 bp upstream of Hvo_2062 start codon, extension towards gene
RV2062XbaI	GAACCTTCTAGACTTCGAGGGCGGCTT	700 bp downstream of Hvo_2062 stop codon, extension towards gene
FW2062updw	GCAGGAGTATCCAACGAACCACTGAC	Hvo_2062 stop codon, extension away from gene (fused with Hvo_2062 start codon)
RV2062updw	GTCAGTGGTTCGTTGGATACTCCTGC	Hvo_2062 start codon, extension away from gene (fused with Hvo_2062 stop codon)
FW2062NDEI	ATTAATCATATGCAACTCACAACCTCTCTTCA	Hvo_2062 start codon, extension towards gene
RV2062EcoRIHis	TATATTGAATTCAGTGATGGTGATGGTGATGC GGGCCGCCGCCGTTGTACGTCC	1 bp upstream of Hvo_2062 stop codon, extension towards gene
FWBamHI0972	AAGCTAGGATCCACGGGATGGAAGACC	700 bp upstream of Hvo_0972 start codon, extension towards gene
RVXbaI0972	GAACCTTCTAGAACCCACGGCGCGCCG	700 bp downstream of Hvo_0972 stop codon, extension towards gene
FW0972updw	TACGAGAACCAACACCTCCCCGCGACTGAT	Hvo_0972 stop codon, extension away from gene (fused with Hvo_0972 start codon)
RV0972updw	ATCAGTCGCGGGGAGGTGTTGGTTCTCGTA	Hvo_0972 start codon, extension away from gene (fused with Hvo_0972 stop codon)
FW0972NdeI	ATTAATCATATGAAACTCAAACAACCTATTTCG	Hvo_0972 start codon, extension towards gene
RV0972EcoRIHis	TATATTGAATTCAGTGATGGTGATGGTGATGC GGGCCGCCGCCGTTGGGACCGG	1 bp upstream of Hvo_0972 stop codon, extension towards gene
FWFlg0972A	ATGAAACTCAAACAACCTATTCGAAGACGACGAC GGTCAGGTCGGTATCGGG	<i>pilA1</i> start codon extending 33 bp in gene attached to 27 bp downstream of <i>flgA1</i> start codon extending 18 bp in gene
FWFlg0972B	ACGGCTGGCTTCCTGGAACAGACAGCGACCGC C	<i>flgA1</i> starting 108 bp downstream from start codon extending 15 bp attached to <i>pilA1</i> starting 123 bp downstream from start codon and extending 18 bp into gene
RVFlg0972B	GGCGGTCGCTGTCTGTTCCAGGAAGCCAGCCG T	The reverse complement of Flg0972FW
FW2451BamHI	AAGCTAGGATCCCGACATCGACAAGGG	700 bp upstream of Hvo_2451 start codon, extension towards gene
RV2450XbaI	AGGTTCTCTAGACGACCTCACCTCGG	700 bp downstream of Hvo_2450 stop codon, extension towards gene
FW2450.1updw	TCGGACATAACGCATGTGAACGCGACACAGC	Hvo_2450 stop codon, extension away from gene (fused with Hvo_2451 start codon)
RV2450.1updw	GCTGTGTCGCGTTCACATGCGTTATGTCCGA	Hvo_2451 start codon, extension away from gene (fused with Hvo_2450 stop codon)
FW2450NdeI	AATTCACATATGAATTTCAAACACCTCCTCGC	Hvo_2450 start codon, extension towards gene

RV2450EcoRIHis	TGAATTGAATTCTCAGTGATGGTGATGGTGATG CGGGCCGCCGCGTCGGGACCGGA	1 bp upstream of Hvo_2450 stop codon, extension towards gene
FW2451NdeI	AATTACCATATGCAACTCAAACATCTCTTCAC	Hvo_2451 start codon, extension towards gene
RV2451EcoRIHis	GTAATTGAATTCTCAGTGATGGTGATGGTGATGC GGGCCGCCTCCGTTGTAGGTCCA	1 bp upstream of Hvo_2451 stop codon, extension towards gene
FWA0632BamHI	AAGCTAGGATCCCCGTCGCCGTCGCG	700 bp upstream of Hvo_A0632 start codon, extension towards gene
RVA0633XbaI	GAACCTTCTAGACCCCGTCCGCGACG	700 bp downstream of Hvo_A0633 stop codon, extension towards gene
FWA0632.3updw	CCTGGGTAGAACATACCGGAATCAGC	Hvo_A0633 stop codon, extension away from gene (fused with Hvo_A0632 start codon)
RVA0632.3updw	GCTGATTCCGGTATGTTCTACCCAGG	Hvo_A0632 start codon, extension away from gene (fused with Hvo_A0633 stop codon)
FWA0632NdeI	CCCGCGCATATGGATATCAAGAAATTCCTTAG	Hvo_A0632 start codon, extension towards gene
RVA0632EcoRIHis	TATATTGAATTCTCAGTGATGGTGATGGTGATGC GGGCCGCCGTCGCGTGTACGTTTG	1 bp upstream of Hvo_A0632 stop codon, extension towards gene
FWA0633NdeI	ATCCTCCATATGCAAATCAAGACAATGTTTAC	Hvo_A0633 start codon, extension towards gene
RVA0633EcoRIHis	TATATTGAATTCTCAGTGATGGTGATGGTGATGC GGGCCGCCGCGTTGTAGGTCCA	1 bp upstream of Hvo_A0633 stop codon, extension towards gene

*Restriction endonuclease sites are underlined. Sequences encoding 6xHis tags are italicized.