

TABLE S1. Primers used in this work.

Primer use	Primer designation (number for figure 2)	Sequence (5' to 3')	Product size (pb)	Reference
IME_ <i>Ssal</i> L25_oriT labelling				
	IMEoriT_1	CACCACTCAAACCTGTCATAAA		This study
	IMEoriT_2km	aacaagatccagaaaggatctgtttttctagaCCGAACCTGGATAGTATAATTTTC		This study
	IMEoriT_3km	aatctgcctcctcatcctcttcatcctctctagaGTCTATCGCCCTCGCATTAG		This study
	IMEoriT_4	GGAGCTCAATTTCTTCGTTTC		This study
	aphaA3_F	GCGATCCTAGAGAGGATGAAGAGGATGAGGAGGCAG		This study
	aphaA3Term_R	GCGACTCTAGAAAAACACGATCCTTTCTGGATCTTGTTTTTGCTTTTGA GACATCTAAATCTAGG		This study
ICE_ <i>Ssal</i> L25_ <i>fda</i> labelling				
	L25_ICE_1	CAGGATTCGCACAATAAGATAG		This study
	L25_ICE_2Spc	gggaaatattcattctaattggCATCCCAGTTGTATGGACT		This study
	L25_ICE_3Spc	gtcacgttacgataacttcgGAATACTGCTTCAAAAGATAAG		This study
	L25_ICE_4	TGCACATATAGTTGGTTTAGG		This study
	Spec_F	CGAAGTTATCGTAACGTGAC		This study
	Spec_R	CCAATTAGAATGAATATTTC		This study
ICES_ <i>fda</i> Δ int deletion and labelling				
	Delta_intICE_1	GTGGCTCTTCTCAATCACTAAA		This study
	Delta_intICE_2Cm	cgtgttattccaccaatacgcCATTATCCCACCTCTTTAAATCG		This study
	Delta_intICE_3Cm	gctatttatcctaagcagagcACCTATCCTTGATACTCTTACACA		This study
	Delta_intICE_4	TGATAATGGTTACGCAGTTGG		This study
	K7catQ5'	CGTATTGGTGGAATAACACG		This study
	K7catQ3'	GCTCTGCTTAGGATAAATAGC		This study
ICES <i>t3</i> Δ int detection				
<i>attR</i>	K7catQ5'	CGTATTGGTGGAATAACACG	1834	This study
	Delta_intICE_4	TGATAATGGTTACGCAGTTGG		This study
IME_ <i>Ssal</i> L25_oriT and flanking region for transformation				
	L25orfKF	GTTGTCCTTATGACCATTAT		This study
	L25orfJR	CACACCGTTGATGTATTC		This study
IME_ <i>Ssal</i> L25_oriT Δ rel deletion				

	Delta_relIME_1	GGGCGGCCGCTAACAATCTCCTCAAGTC		This study
	Delta_relIME_2	GATACTATCTTCATCAATCAT		This study
	Delta_relIME_3	atgattgatgaagatagatcGAATTCCTAGAATTTACTAGT		This study
	Delta_relIME_4	CGGGGCCCAATCTGGTCTCTAATACTG		This study
Detection of ICEs and IMEs integrated and excised forms				
ICE_SsalL11_fda				
<i>attL</i>	attBfdaSsal_F	GCCCAACCAAATAAACAATAAAA	305	[43]
	attlSt3_R	CGGTGTAATGGGAAGTATGG		[30]
<i>attR</i>	intlCESt3-fda_F	ACCTATACTTGATACTCTTACACA	951	This study
	L25_intlICE4	TGATAATGGTTACGCAGTTGG		This study
<i>attI</i>	intlCESt3-fda_F	ACCTATACTTGATACTCTTACACA	153	This study
	attlSt3_R	CGGTGTAATGGGAAGTATGG		[30]
<i>attB</i>	attBfdaSsal_F	GCCCAACCAAATAAACAATAAAA	1084	[43]
	L25_intlICE4	TGATAATGGTTACGCAGTTGG		This study
IME_SsalL11_oriT				
<i>attL</i>	CP ICE Ssa2_F	GTCTTTATCATCTTTGCCAT	1206	This study
	L11-IMEcds32_R	AACAATTATCCGATTTGGAAG		This study
<i>attR</i>	intlIME_oriT_F	CTGCTCTTTATTGGGAAG	759	This study
	rellCE_R	GGCCTGTTTGTTTTCTGA		This study
<i>attI</i>	L11-IMEcds32_R	AACAATTATCCGATTTGGAAG	1097	This study
	intlIME_oriT_F	CTGCTCTTTATTGGGAAG		This study
<i>attB</i>	CP ICE Ssa2_F	GTCTTTATCATCTTTGCCAT	890	This study
	rellCE_R	GGCCTGTTTGTTTTCTGA		This study
ICE_SsalL25_fda				
<i>attL</i>	attBfdaSsal_F (1)	GCCCAACCAAATAAACAATAAAA	442	[43]
	attlSt3_R (2)	CGGTGTAATGGGAAGTATGG		[30]
<i>attR</i>	intlCESt3-fda_F (7)	ACCTATACTTGATACTCTTACACA	951	This study
	L25_intlICE4 (8)	TGATAATGGTTACGCAGTTGG		This study
<i>attI</i>	intlCESt3-F (7)	AGGGCTTTCTGACGAATTAG	891	This study
	attlSt3_R (2)	CGGTGTAATGGGAAGTATGG		[30]
<i>attB</i>	attBfdaSsal_F (1)	GCCCAACCAAATAAACAATAAAA	1206	[43]
	L25_intlICE4 (8)	TGATAATGGTTACGCAGTTGG		This study
<i>var_L25</i>	L25varICE_F	CGAAAGGAGATCAGTATTAG	724	This study

IME_SsalL25_oriT	L25varICER	GGCTAGAACCAGAAATAAA		This study
<i>attL</i>	CP ICE Ssa2_F (3)	GTCTTTATCATCTTTGCCAT	1277	This study
	L25-IMEcds20_R (4)	GTATTCAATGTTCCGCTATG		This study
<i>attR</i>	IME_oriT_F (5)	TACATTCAACCAAAAGGT	487	This study
	rellCE_R (6)	GGCCTGTTTGTTTTCTGA		This study
<i>attI</i>	IME_oriT_F (5)	TACATTCAACCAAAAGGT	417	This study
	IME_oriT_R (4)	TGGTAGCTTTTTGGTAGC		This study
<i>attB</i>	rellCE_R (6)	GGCCTGTTTGTTTTCTGA	921	This study
	CP ICE Ssa2_F (3)	GTCTTTATCATCTTTGCCAT		This study
ICE_SsalL45_rpsI				
<i>attL</i>	N20cds18_F	CCAAGCCGTCGTCATAATAG	1173	[43]
	JIMcds19_F	TTCTGGTTGGGATCGTTATG		This study
<i>attR</i>	IntRpsI_F1	TAWTCWGARGCHYTWACKCATAG	297	This study
	RpsI_F	CAGACCTTCGTCTCGTTATC		This study
<i>attI</i>	IntRpsI_F1	TAWTCWGARGCHYTWACKCATAG	331	This study
	JIMcds19_F	TTCTGGTTGGGATCGTTATG		This study
<i>attB</i>	N20cds18_F	CCAAGCCGTCGTCATAATAG	1139	[43]
	RpsI_F	CAGACCTTCGTCTCGTTATC		This study
IME_SsalL45_oriT				
<i>attL</i>	CP ICE Ssa2_F	GTCTTTATCATCTTTGCCAT	1014	This study
	L45-IMEcds40_R	GCAATCAATACTCCAACAAG		This study
<i>attR</i>	intIME_oriT_F	CTGCTCTTTATTGGGAAG	759	This study
	rellCE_R	GGCCTGTTTGTTTTCTGA		This study
<i>attI</i>	intIME_oriT_F	CTGCTCTTTATTGGGAAG	902	This study
	L45-IMEcds40_R	GCAATCAATACTCCAACAAG		This study
<i>attB</i>	CP ICE Ssa2_F	GTCTTTATCATCTTTGCCAT	899	This study
	rellCE_R	GGCCTGTTTGTTTTCTGA		This study
ICE_SsalF1-4_fda				
<i>attR</i>	catQ1	TAGAAAGCCATACTTTGAGC	1883	This study
	L25_intICE4	TGATAATGGTTACGCAGTTGG		This study
<i>attI</i>	catQ1	TAGAAAGCCATACTTTGAGC	1103	This study
	attISt3_R	CGGTGTAATGGGAAGTATGG		This study

ICES _{t3}				
<i>attL</i>	132.3	GGACTACTAAGAGAACAT	273	[22]
	attIS _{t3} _R	CGGTGTAATGGGAAGTATGG		This study
<i>attR</i>	intICES _{t3} -fda_F	ACCTATACTTGATACTCTTACACA	227	This study
	attBS _{t3} _R	CTCTTCGACCCACGTAAATTC		This study
<i>attI</i>	attIS _{t3} _R	CGGTGTAATGGGAAGTATGG	887	This study
	attBS _{t3} _R	CTCTTCGACCCACGTAAATTC		This study
<i>attB</i>	132.3	GGACTACTAAGAGAACAT	361	[22]
	131.2	TGTTGCTGAATACGAAGC		[22]
<i>ermB</i> in <i>ΔepsE S. thermophilus</i> strains				
	EG940	TGTAATTAAGAAGGAGTGA	766	[24]
	EG941	TAGAATTATTCCTCCCGT		[24]

The primer sequences are capitalized when the sequence is complementary to the amplified region. Lower case letters are complementary to a primer allowing the amplified region to overlap. Bold letters indicate the restriction sites *Apa*I and *Not*I (underlined) and extra nucleotides to ensure optimal digestion of PCR amplified region by restriction enzymes prior to cloning in plasmid pG+host9 [23].