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Amplification of the Gene for Isoleucyl-tRNA Synthetase Facilitates Adaptation to the Fitness Cost of Mupirocin Resistance in *Salmonella enterica*

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TABLE S1

Strains used in the study

Designation		Relevant characteristics	Reference
In the lab strain collection	In this study		
JB124	WT	Wild-type	Lab collection
JB1853	R1	IleRS (H594Y, CAC1780 ->TAC)	(PAULANDER *et al.* 2007a)
JB1855	R2	IleRS (F596L, TTC1788 ->TTG)	"
JB1850	R3	IleRS (WV631L, TGGGTG1889-1891 ->TTG)	"
DA8947	C1	Evolved from R1: IleRS (H594Y) and expression mutation C (-591)->A	(PAULANDER *et al.* 2007a) and this study
DA11020	C2	Evolved from R1: IleRS (H594Y) and expression mutation C (-1036)->T	"
DA11022	C3	Evolved from R1: IleRS (H594Y) and 4-fold amplification of *ileS*	"
DA8992	C4	Evolved from R2: IleRS (F596L) and expression mutation C (-577)->T	"
DA9162	C5	Evolved from R2: IleRS (F596L) and expression mutation G (-22) ->T	"
DA8995	C6	Evolved from R2: IleRS (F596L) and expression mutation C (-1036)->T	"
DA9163	C7	Evolved from R2: IleRS (F596L) 2-fold amplification of *ileS* and expression mutation T (-421)->C	"
DA9167	C8	Evolved from R2: IleRS (F596L) 2-fold amplification of *ileS* and expression mutation T (-405)->C	"
DA9171	C9	Evolved from R2: IleRS (F596L) 2-fold amplification of *ileS* and expression mutation T (-405)->C	"
DA9169	C10	Evolved from R2: IleRS (F596L) and 4-fold amplification of *ileS*	"
DA9150	C11	Evolved from R3: IleRS (WV631L), 2-fold amplification of *ileS* and expression mutation C (-567)->T	"
DA9155	C12	Evolved from R3: IleRS (WV631L) and 6-fold amplification of *ileS*	"
DA13883	C12-1	Evolved from C12: IleRS (WV631L) and 2-fold amplification of *ileS*	This study
DA13884	C12-3	Evolved from C12: IleRS (WV631L, Q420H)	"
DA13867	C12-4	Evolved from C12: IleRS (WV631L) and 2-fold amplification of *ileS*	"
DA13855	C12-5	Evolved from C12: IleRS (WV631L, Q420H)	"

DA13885	C12-6	Evolved from C12: IleRS (WV631L) and 2-fold amplification of *ileS*	“
DA13868	C12-7	Evolved from C12: IleRS (WV631L, Q420H)	“
DA13886	C12-8	Evolved from C12: IleRS (WV631L, P184T)	“
DA13856	C12-9	Evolved from C12: IleRS (WV631L) and 2-fold amplification of *ileS*	“
DA13869	C12-10	Evolved from C12: IleRS (WV631L) and 2-fold amplification of *ileS*	“
DA13887	C12-11	Evolved from C12: IleRS (WV631L) and 2-fold amplification of *ileS*	“
DA13870	C12-12	Evolved from C12: IleRS (WV631L) and 2-fold amplification of *ileS*	“
DA13871	C12-13	Evolved from C12: IleRS (WV631L) and 5-fold amplification of *ileS*	“
DA13888	C12-14	Evolved from C12: IleRS (WV631L) and 3-fold amplification of *ileS*	“
DA13874	C12-16	Evolved from C12: IleRS (WV631L) and 3-fold amplification of *ileS*	“
DA13876	C12-17	Evolved from C12: IleRS (WV631L) and 2-fold amplification of *ileS*	“
DA13872	C12-18	Evolved from C12: IleRS (WV631L) and 4-fold amplification of *ileS*	“

TABLE S2

Primers

Name	Purpose	Sequence (5' -3')
ileS Forward	PCR	GGTCAAAAGGGGTCTATGC
ileS Reverse	PCR	CAACAAAGCCGTGCCACA
ileS qPCR Forward	qPCR primer	GCGAGCGTGAAAAATATGTCTTC
ileS qPCR Reverse	qPCR primer	CGTCATTAAATTCTTCATTCTCTTCCA
recA qPCR Forward	qPCR primer	GGCGAAATCGGCGACTCT
recA qPCR Reverse	qPCR primer	CATACGGATCTGGTTGATGAAAATC
Prom *ileS* Forward	Promoter cloning	TGCGTTGTGCTTACGAGCCTTT
Prom *ileS* Reverse	Promoter cloning	CAGCATTCCCGGTTCACGCTT
ileS (1)	Sequencing	AGCATTCATATTGGTCACTCA
ileS (2)	Sequencing	CTTCATTCGTCTGGGCGTGTT
ileS (3)	Sequencing	ATCTGGTTGAAAGCGTCAT
ileS (4)	Sequencing	CTGGCGGCGATGGAAGAGGTG
ileS (5)	Sequencing	TCCTGCTGGCGAACCTCAATG
ileS (6)	Sequencing	GAACCT GGAAGCAAAAGTGAC
Prom *ileS* (1)	Sequencing	GGACGAGTGCCAATGTTCGCTA
Prom *ileS* (2)	Sequencing	CGCATGGCGATGAAAAGCATCT
STM0036 Forward	Probe a for Southern	ACATATCGCGATGACGCCGTGGTC
STM0036 Reverse	Probe a	CGGTAGATAGTCTGGGCTCCCCAG
caiT Forward	Probe b	GTAGCTACGCACATCGCTGGCGAT
caiT Reverse	Probe b	TCACCAACGTCTGGGGTTGGGCAT
STM0019 Forward	Probe c	CGGATGAGCGTACCGTCACGCT
STM0019 Reverse	Probe c	TTATGGATCGGTAACGTCGCGT
kefC Forward	Probe d	TATTGGCGTCGGCATGTCGATT
kefC Reverse	Probe d	ATGCGACTTCACCAGTTCACTCAG
talB Forward	Probe e	TGAAGCGTCTATCGCCAAAGCA
talB Reverse	Probe e	TTCCTGGTCTACCGCAAACTTACG
sthB Forward	Probe f	TCCACGCCCGTTTCGTTATTCA
sthB Reverse	Probe f	CACCGACCTGTCGTTATCGCAA
serB Forward	Probe g	TCCACGGCGATCCAAATTGAGT
serB Reverse	Probe g	ATGCAAAACACGCCCATCAGGT
murD Forward	Probe h	TCGCGAATTGTACGTGCTGGAA
murD Reverse	Probe h	ATCCAACGTACGCCGTTATGCT
deoB Forward	Probe i	AAAACAGCTTCCCGCAGGAACT
deoB Reverse	Probe i	GATGGTTTTATCGCCCGCTTCT
dnaC Forward	Probe j	CGTTCGCCAAGCATTTTCGTCA
dnaC Reverse	Probe j	AAATGCAGCGCACCTTTAACCG
recA Forward	Probe recA	ATCGGGCGTGGCATTCTGATTA
recA Reverse	Probe recA	CGAAAGCGGAAATCGAAGGCGAAA

CA5	Joint Point mapping*	ATCGCCACCCTAATTAAACCCA
BD1	Joint Point mapping	TGGCTGAGACTATTCGTCAGCA
IC9B	Joint Point mapping	GCCGACGCCATTGATAAAGCC
IG1B	Joint Point mapping	AGGCACCCATACCGATCACCA

* Complete list of primers used for joint point mapping is available upon request.