

**Table 1. Bacterial strains and plasmids used in this study**

Strain or plasmid	Genotype or relevant characteristic	Ref. or source
<i>Escherichia coli</i>		
XL1-Blue	<i>RecA1, endA1, gyrA96, thi-1, hsdR17, supE44, relA1, lac, [F', proAB, lacI<sup>f</sup>ZAM15, Tn10 (tet<sup>R</sup>)]</i>	1, Stratagene
B ER2566	<i>F', λ, fhuA2 [lon], ompT, lacZ::T7, geneI, gal, sulA11, Δ(mcrC-mrr)114::IS10, R (mcr-73::miniTn10)2, R(zgb-210::Tn10)1, (TetS), endA1 [dcm]</i>	2, NEB
M15(pREP4)	<i>Lac, ara, gal, mtl, recA<sup>+</sup>, uvr<sup>+</sup>, [pREP4, lacI, kan<sup>r</sup>]</i>	3
SK6600	<i>F', ara<sup>-</sup>, Δ(lac-proAB), rpsL, F80, lacZAM15(r<sup>+</sup>, m<sup>+</sup>)</i>	4
SK6600ispG::neo <sup>R</sup>	<i>F', ara<sup>-</sup>, Δ(lac-proAB), rpsL, F80, lacZAM15(r<sup>+</sup>, m<sup>+</sup>), ispG::neo<sup>R</sup> (neo<sup>R</sup>)</i>	This study
Plasmids		
pMAL-C2	High-copy maltose binding protein expression vector	NEB
pMALispG	Expression of <i>ispG</i> ( <i>gcpE</i> ) from <i>Escherichia coli</i> as maltose binding fusion protein	This study
pBluescript SKII <sup>-</sup>	High-copy cloning vector	Stratagene
pACYC184	Low-copy cloning vector	5, NEB
pMAK705	Low-copy vector with temperature sensitive origin for DNA replication ( <i>Cm<sup>R</sup></i> )	4
pMAKispGneo <sup>R</sup>	pMAK705 with a 1.7-kb fragment containing the <i>ispG</i> gene and adjacent regions interrupted by a neomycin resistance cassette	This study
pBSipp	Expression of <i>mk, pmk, and dpmd</i>	This study
pACYCipp	Expression of <i>mk, pmk, and dpmd</i>	This study
pNCO113	High-copy expression vector	ATCC, PTA-852
pNCOidi	Expression of <i>idi</i> from <i>E. coli</i>	This study

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