

**Table S1 Strains and plasmids**

Strain/plasmid	Genotype and relevant features	Reference
<b><i>E. coli</i> K-12 strains</b>		
MC4100	F- <i>araD139 (argF-lac)U169 rpsL150 relA1 flb5301 deoC1 ptsF25 thi</i>	Boyd et al 2000
JCM158	MC4100 <i>ara</i> <sup>r/-</sup>	Malinverni et al 2006
JCM320	JCM158 $\Delta$ <i>bamA</i> $\Delta$ ( <i>latt-lom</i> ):: <i>bla</i> P <sub>BAD</sub> <i>bamA araC</i>	Wu et al 2005
DPR437	JCM320 pDPR1	Ricci et al 2012
DPR660	JCM320 pBamA <sup>R661G</sup>	This study
DPR1345	JCM320 pBamA <sup>D740G</sup>	This study
DPR1346	JCM320 pBamA <sup>D740G+R661G</sup>	This study
DPR1374	JCM320 pBamA <sup>D740G+F395V</sup>	This study
DPR1309	JCM320 pBamA <sup>D740G+T423I</sup>	This study
DPR1310	JCM320 pBamA <sup>D740G+E607A</sup>	This study
DPR1311	JCM320 pBamA <sup>D740G+G631V</sup>	This study
DPR1500	JCM320 pBamA <sup>D740G+G631W</sup>	This study
DPR1313	JCM320 pBamA <sup>D740G+F717L</sup>	This study
DPR1317	JCM320 pBamA <sup>R661G+F395V</sup>	This study
DPR1318	JCM320 pBamA <sup>R661G+T423I</sup>	This study
DPR1319	JCM320 pBamA <sup>R661G+E607A</sup>	This study
DPR1320	JCM320 pBamA <sup>R661G+G631V</sup>	This study
DPR1501	JCM320 pBamA <sup>R661G+G631W</sup>	This study
DPR1321	JCM320 pBamA <sup>R661G+F717L</sup>	This study
<b>Plasmids</b>		
pZS21	Expression vector; $\lambda$ P <sub>L</sub> -driven expression, Kan <sup>r</sup>	Lutz & Bujard, 1997
pBamA (pDPR1)	pZS21:: <i>bamA</i> <sup>WT</sup>	Kim et al 2007
pBamA <sup>R661G</sup>	pZS21:: <i>bamA</i> <sup>R661G</sup>	This study

pBamA <sup>D740G</sup>	pZS21:: <i>bamAD740G</i>	This study
pBamA <sup>D740G+R661G</sup>	pZS21:: <i>bamAD740G+R661G</i>	This study
pBamA <sup>D740G+F395V</sup>	pZS21:: <i>bamAD740G+F395V</i>	This study
pBamA <sup>D740G+T423I</sup>	pZS21:: <i>bamAD740G+T423I</i>	This study
pBamA <sup>D740G+E607A</sup>	pZS21:: <i>bamAD740G+E607A</i>	This study
pBamA <sup>D740G+G631W</sup>	pZS21:: <i>bamAD740G+G631W</i>	This study
pBamA <sup>D740G+G631V</sup>	pZS21:: <i>bamAD740G+G631V</i>	This study
pBamA <sup>D740G+F717L</sup>	pZS21:: <i>bamAD740G+F717L</i>	This study
pBamA <sup>R661G+F395V</sup>	pZS21:: <i>bamAR661G+F395V</i>	This study
pBamA <sup>R661G+T423I</sup>	pZS21:: <i>bamAR661G+T423I</i>	This study
pBamA <sup>R661G+E607A</sup>	pZS21:: <i>bamAR661G+E607A</i>	This study
pBamA <sup>R661G+G631W</sup>	pZS21:: <i>bamAR661G+G631W</i>	This study
pBamA <sup>R661G+G631V</sup>	pZS21:: <i>bamAR661G+G631V</i>	This study
pBamA <sup>R661G+F717L</sup>	pZS21:: <i>bamAR661G+F717L</i>	This study

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