



Table 1. Strains used in this study. Ajouter TviB, double mutant, complement, STM cpxR.

Strain	Description	Reference
S. Typhi ISP1820	wild type	(77)
DEF201	$\Delta invA \Delta ssrB$	This study
DEF433	$\chi 8521$, constitutive <i>phoP24</i>	R. Curtis III
DEF1239	$\Delta arcA$	This study
DEF1248	$\Delta baeR$	This study
DEF1323	$\Delta citB$	This study
DEF1522	$\Delta cheY$	This study
DEF1320	$\Delta copR$	This study
DEF1238	$\Delta cpxR$	This study
DEF1254	$\Delta creB$	This study
DEF1306	$\Delta dcuR$	This study
DEF1253	$\Delta dpiA$	This study
DEF1307	$\Delta glnG$	This study
DEF1318	$\Delta hydG$	This study
DEF1240	$\Delta kdpE$	This study
DEF1289	$\Delta narL$	This study
DEF1290	$\Delta narP$	This study
DEF1508	$\Delta ompR$	This study
DEF1523	$\Delta pgtA$	This study
DEF570	$\Delta phoB$	(82)
DEF1241	$\Delta phoP$	This study
DEF1308	$\Delta pmrA$	This study
DEF1312	$\Delta qseB$	This study
DEF1310	$\Delta qseF$	This study
DEF1319	$\Delta rcsB$	This study
DEF1311	$\Delta rstA$	This study
DEF1247	$\Delta sirA$	This study
DEF149	$\Delta ssrB$	(30)
DEF1314	$\Delta tctD$	This study
DEF1313	$\Delta torR$	This study
DEF1315	$\Delta ttrR$	This study
DEF1321	$\Delta uhpA$	This study
DEF1322	$\Delta yehT$	This study
DEF1511	$\Delta ompR$ (pWSK:ompR)	This study
S. Typhi Ty2	wild-type	This study
DEF1516	Ty2 $\Delta ompR$	This study
S. Typhimurium SL1344	wild-type	(132)
DEF1479	SL1344 $\Delta ompR$ -envZ	This study
DEF1480	SL1344 $\Delta cpxR$	This study
E. coli DH5 α pir	<i>supE44 hsdR17 recA1 endA1 gyrA96 thi-1 relA1</i> λ pir	Invitrogen
E. coli $\chi 7213$	Sm10 λ pir <i>asd thi thr leu tonA lacY supE recA</i> RP4 2-Tc::Mu[λ pir] $\Delta asdA4$	(133)

Table 2. Plasmids used in this study (Ajouter complément et autres).

Plasmid	Description	Reference
pMEG375	<i>sac</i> RB, <i>mob</i> RP4, <i>ori</i> R6K, vecteur suicide	Megan Health
pSIF475	pMEG375 with flanking region of <i>arcA</i> gene used for <i>arcA</i> deletion	This study
pSIF480	pMEG375 with flanking region of <i>baeR</i> gene used for <i>baeR</i> deletion	This study
pSIF514	pMEG375 with flanking region of <i>citB</i> gene used for <i>citB</i> deletion	This study
pSIF553	pMEG375 with flanking region of <i>cheY</i> gene used for <i>cheY</i> deletion	This study
pSIF511	pMEG375 with flanking region of <i>copR</i> gene used for <i>copR</i> deletion	This study
pSIF476	pMEG375 with flanking region of <i>cpxR</i> gene used for <i>cpxR</i> deletion	This study
pSIF483	pMEG375 with flanking region of <i>creB</i> gene used for <i>creB</i> deletion	This study
pSIF484	pMEG375 with flanking region of <i>dcuR</i> gene used for <i>dcuR</i> deletion	This study
pSIF482	pMEG375 with flanking region of <i>dpiA</i> gene used for <i>dpiA</i> deletion	This study
pSIF485	pMEG375 with flanking region of <i>glnG</i> gene used for <i>glnG</i> deletion	This study
pSIF509	pMEG375 with flanking region of <i>hydG</i> gene used for <i>hydG</i> deletion	This study
pSIF477	pMEG375 with flanking region of <i>kdpE</i> gene used for <i>kdpE</i> deletion	This study
pSIF486	pMEG375 with flanking region of <i>narL</i> gene used for <i>narL</i> deletion	This study
pSIF487	pMEG375 with flanking region of <i>narP</i> gene used for <i>narP</i> deletion	This study
pSIF549	pMEG375 with flanking region of <i>ompR</i> gene used for <i>ompR</i> deletion	This study
pSIF554	pMEG375 with flanking region of <i>pgtA</i> gene used for <i>pgtA</i> deletion	This study
pSIF182	pMEG375 with flanking region of <i>phoB</i> gene used for <i>phoB</i> deletion	(82)
pSIF478	pMEG375 with flanking region of <i>phoP</i> gene used for <i>phoP</i> deletion	This study
pSIF489	pMEG375 with flanking region of <i>pmrA</i> gene used for <i>pmrA</i> deletion	This study
pSIF505	pMEG375 with flanking region of <i>qseB</i> gene used for <i>qseB</i> deletion	This study
pSIF497	pMEG375 with flanking region of <i>qseF</i> gene used for <i>qseF</i> deletion	This study
pSIF510	pMEG375 with flanking region of <i>rcsB</i> gene used for <i>rcsB</i> deletion	This study
pSIF498	pMEG375 with flanking region of <i>rstA</i> gene used for <i>rstA</i> deletion	This study

pSIF479	pMEG375 with flanking region of <i>sirA</i> gene used for <i>sirA</i> deletion	This study
pSIF074	pMEG375 with flanking region of <i>ssrB</i> gene used for <i>ssrB</i> deletion	(30)
pSIF506	pMEG375 with flanking region of <i>tctD</i> gene used for <i>tctD</i> deletion	This study
pSIF507	pMEG375 with flanking region of <i>torR</i> gene used for <i>torR</i> deletion	This study
pSIF508	pMEG375 with flanking region of <i>ttrR</i> gene used for <i>ttrR</i> deletion	This study
pSIF512	pMEG375 with flanking region of <i>uhpA</i> gene used for <i>uhpA</i> deletion	This study
pSIF513	pMEG375 with flanking region of <i>yehT</i> gene used for <i>yehT</i> deletion	This study
pSIF548	pWSK29 with <i>ompR</i>	This study

Table 3. Primers used in this study.

Gene	Primers	Sequence
<i>arcA</i>	ArcA F1	cgggatccCCCACGACCAAGCTAATGAT
	ArcA R2	CCGTGAATGATAAGAATGTGCGGGGTCTG
	ArcA F3	CATTCTTATCATTACGCGGAAGGTTATC
	ArcA R4	gctctagaGTCCTGTGAGCATCCCCTTA
<i>baeR</i>	BaeR F1	cgggatccACGGAAGTGTCCTGTAACC
	BaeR R2	CGTATAAATCTGTCCAGCTTGGGTTCAT
	BaeR F3	CTGGGACAGATTATACGCGCGGTCTACG
	BaeR R4	gctctagaTAGCGGTGAGATGACGTTTC
<i>citB</i>	CitB F1	cgggatccATTTTCGAGCGTGGAGTGAC
	CitB R2	TAGCTGATCGCTAGCATCGGTTCTGCTTC
	CitB F3	GATGCTAGCGATCAGCTACGGGAAAGTGG
	CitB R4	gctctagaACCCTGCAATCCTGTTTTGT
<i>cheY</i>	cheY F1	cgggatccCGAAGCAAGTTGTGTGGTGT
	cheY R2	GTTTCTCAAGCATGGTCGAAAAGTCATCC
	cheY F3	CGACCATGCTTGAGAAACTGGGCATGTGA
	cheY R4	gctctagaCCGTCATCTGGACGACATAA
<i>copR</i>	CopR F1	cgggatccTCGTTTCATGCTTCACTCCTT
	CopR R2	ACTTTGGCGCCCTGACGTACCCACTCAAT
	CopR F3	ACGTCAGGGCGCCAAAGTAGACGATCCAT
	CopR R4	gctctagaGCCGATTTATTAGCGTCAT
<i>cpxR</i>	CpxR F1	cgggatccGCCATAACAGCAGCGGTAAC
	CpxR R2	AAACCACGGCAGCTCTCGGTCATCATCAA
	CpxR F3	CGAGAGCTGCCGTGGTTTAAACATTGCGT
	CpxR R4	gctctagaTCTCTACGCGGCCATATTTT
<i>creB</i>	CreB F1	cgggatccCAGGGAGAGGTGGTTTTCAA
	CreB R2	TAGTTTAGCTCCCTGTTTCATCTCGACTA
	CreB F3	GAACAGGGAGCTAAACTACGCGCGATCA
	CreB R4	gctctagaGGTTGCCGAAAGGAGAT
<i>dcuR</i>	DcuR F1	cgggatccGGTTACGGTGCTGATTACGG
	DcuR R2	GCTGAACGCCGACATAGCGGCGATTTAAC
	DcuR F3	GCTATGTCGGCGTTCAGCCGGAACATTAC
	DcuR R4	gctctagaCACTCTCGGCATGGGATAAT
<i>dpiA</i>	DpiA F1	cgggatccAAGTACCCGAGCTGACGAAC
	DpiA R2	AATCAGGTGGCGGATATATTCTGCGTGCAT
	DpiA F3	TATATCCGCCACCTGATTGTGCGAGAGAT
	DpiA R4	gctctagaCCGGGATGGCTAAAATATCA
<i>glnG</i>	GlnG F1	cgggatccGCTGTTCTACCCGATGGTCA
	GlnG R2	ACCCTGCGTACCCAACGGATGGAAGTAT
	GlnG F3	CGTTGGGTGACGCAGGGTCATAAACAGGA
	GlnG R4	gctctagaCGCTCCACTCGATACCAGAT
<i>hydG</i>	2-HydG R4	gctctagaTGGCTGACGGTAAGGTTTTTC
	2-HydG F3	CGCTGCTTCTGGAGAAAGAGGTGATTCTGG
	2-HydG R2	CTTTCTCCAGAAGCAGCGCCTGTAAAATC
	2-HydG F1	cgggatccGAACGCTATTCATGCGATTG
<i>kdpE</i>	KdpE F1	cgggatccATAATGGGCCGGGTATTCTCT
	KdpE R2	GGCGTGGGCGGATGGCCTGTTTCATCTTCA
	KdpE F3	AGGCCATCCGCCACGCCATTTTATTATC
	KdpE R4	gctctagaGCAATCTGTGAACCAGATCAAC
<i>narL</i>	NarL F1	cgggatccAAACGCCGAACGCAGTAAT
	NarL R2	CCAGACGCCTTACACCCGTGCGTAGCAT
	NarL F3	CGGGTGTAAGGCGTCTGGATATCACCGAAA
	NarL R4	gctctagaCAGCGTGCTCTTCCAATGA
<i>narP</i>	NarP F1	cgggatccGCAGCTACATATGCCACACT
	NarP R2	AGCCCCTGCATACCTCGCCGCATAAGTGG
	NarP F3	GCGAGGTATGCAGGGGCTTTCTAACAAAC

	NarP R4	gctctagaTGGCGCAGGAGAAATAAGAC
<i>ompR</i>	OmpR F1	cgggatccggggttgccgattaattgta
	OmpR R2	ACCGTCCGGACGCATATCGTCATCAACCA
	OmpR F3	GATATGCGTCCGGACGGTTCTAAAGCA
	OmpR R4	gctctagaCAGTTGCAGCTTATCGGT
<i>pgtA</i>	PgtA F1	cgggatccGCGCTGGAGGTTTATATTGC
	PgtA R2	TTTGCAAGTCCGCTTTTACCCACTCTTTG
	PgtA F3	TAAAAGCGGACTTGCAAATCCCCGTAA
	PgtA R4	gctctagaTGTCAAATCGTCGGACAAGA
<i>phoP</i>	PhoP F1	cgggatccTGACGCCGGCAAATTATATC
	PhoP R2	CGTGCGGATTGAGGTGGTGGCGTAATAA
	PhoP F3	ACCACCTGAATCCGCACGATGTCATTACC
	PhoP R4	gctctagaGCAGACGAAACGTGGTTTTA
<i>pmrA</i>	PmrA F1	cgggatccACATGTCCCGATGCTCATTT
	PmrA R2	GTTCGTTATGCGTGTGCTCTTCAACAATC
	PmrA F3	ACGACACGCATAACGAACCCTCGACCAA
	PmrA R4	gctctagaTTTGCTCAGTGCTTTCATGC
<i>qseB</i>	QseB F1	aaggaaaaagcggccgcTCCCTTTCATGTCGTTTCAG
	QseB R2	TTCCACTGCACGTCCCTCGGTAAACCAGT
	QseB F3	GAGGGACGTGCAGTGGAAGTCCATGTTCA
	QseB R4	gctctagaGGCGAACAACATCAACTGTG
<i>qseF (yfhA)</i>	YfhA F1	cgggatccTGGGGAGTTTAACCGACATT
	YfhA R2	GAGAGTAGCTTCAGTAATCCGGGATCGTC
	YfhA F3	ATTACTGAAGCTACTCTCCCGTCACGAA
	YfhA R4	gctctagaCTTCAGTGACCGTCATACCG
<i>rcsB</i>	RcsB F1	cgggatccGGGTGTTTGCCATGCTTAAT
	RcsB R2	ATTTCTTCTCAAGTGATTTGCGAATACCG
	RcsB F3	AATCACTTGAGAAGAAATCGGCGATGATG
	RcsB R4	gctctagaCTGTTTGTCGAAGCCTGTGA
<i>rstA</i>	RstA F1	cgggatccGGGCAGCTTTAATCACGAGT
	RstA R2	TCAGCAGCGTAAGCGGCAATGAGAGAACC
	RstA F3	TGCCGCTTACGCTGCTGAGCCCTATCGTAT
	RstA R4	gctctagaAAGGGGCTGTTCCGACTAAT
<i>sirA</i>	SirA F1	cgggatccAAATAGCAGCCCGGAACAG
	SirA R2	CTCCGCATTACCAGTTCGTGGTCATCAA
	SirA F3	GAACTGGTGAATGCGGAGACGTTAACAAGC
	SirA R4	gctctagaATGCGTTACCGTGACATCAA
<i>tctD</i>	TctD F1	aaggaaaaagcggccgcTGCTTGAGTAAGGGTACGA
	TctD R2	CTTCCCTGAGCCAGCTCACGGTTATCTTC
	TctD F3	TGAGCTGGCTCAGGGAAGCGATGTACGAAT
	TctD R4	gctctagaAGGGCACGTTAACTTCCAGA
<i>torR</i>	TorR F1	cgggatccAACGCTCTCCAGAGTTTTCG
	TorR R2	AAGCGGCGAGATACCCCTCTGCTCAAAA
	TorR F3	AGGGGTATCTCGCCGCTTACGTCATAAAAT
	TorR R4	gctctagaCAACCGGTGCCTGAAAATA
<i>ttrR</i>	TtrR F1	cgggatccATTACGTCAGGCGTTTCAGC
	TtrR R2	AATCAGTTCCGCCGTATCATATCCAGTA
	TtrR F3	GATACGGCGGAACTGATTAGGCGTTTCG
	TtrR R4	gctctagaATCTCGCGGTACAGTTCGTC
<i>uhpA</i>	UhpA F1	cgggatccGGAACCTTGCTTCAACTGGA
	UhpA R2	ACCGCCATATCGCAGATACACACCTGTACG
	UhpA F3	TATCTGCGATATGGCGGTAAAAGAGATTGC
	UhpA R4	gctctagaAGGCCGAAGGGAAGAGTAG
<i>yehT</i>	YehT F1	cgggatccTAATGCGGGACTGTATCAGC
	YehT R2	GCGACGGCTTAACGGCTCATCATCCACAA
	YehT F3	GAGCCGTTAAGCCGTCGCTATCTGAAAA
	YehT R4	gctctagaGCTGAAACCCCTCTTCCTCT

<i>ompR-EnvZ</i>	ompR-EnvZ F1	cgggatccGGGGTTGCCGATTAATTGTA
	ompR-EnvZ R2	tgtcgtcccACGCATATCGTCATCAACCA
	ompR-EnvZ F3	gatatgcgtGGGACGACAAAAGAGGCATA
	ompR-EnvZ R4	gctctagaTGGCGAAACTGTTTCATTGAG
