

# Supplementary Materials: Structure, Biology, and Therapeutic Application of Toxin-Antitoxin Systems in Pathogenic Bacteria

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**Table S1.** Toxin–Antitoxin pairs of human pathogenic bacteria addressed in the text. The information on TA pairs was collected from the web-based TA database (TADB) [1]. The minus sign indicates “Not Applicable”.

Bacterial Species	Classification (Family/Domain)	Toxin	Antitoxin	Regulator	Experimental Validation
<i>Streptococcus pyogenes</i> M1 GAS	RelBE or parDE/RHH-RelE	SPy_0552	SPy_0550	–	–
<i>Streptococcus pyogenes</i> M1 GAS	mazEF/Xre-MazF	SPy_0938	SPy_0939	–	–
<i>Streptococcus pyogenes</i> M1 GAS	-/-	SPy_1248	SPy_1249	–	–
<i>Streptococcus pyogenes</i> M1 GAS	parDE/RHH-RelE	SPy_1927	SPy_1926	–	–
<i>Streptococcus pyogenes</i> M1 GAS	-/Xre-Bro	SPy_2128	SPy_2127	–	–
<i>Streptococcus pyogenes</i> MGAS10270	RelBE or parDE/RHH-RelE	MGAS10270_S py0458	MGAS10270_S py0456	–	–
<i>Streptococcus pyogenes</i> MGAS10270	-/-	MGAS10270_S py0548	MGAS10270_S py0549	–	–
<i>Streptococcus pyogenes</i> MGAS10270	hicBA/HicB-HicA	MGAS10270_S py0569	MGAS10270_S py0568	–	–
<i>Streptococcus pyogenes</i> MGAS10270	-/Xre-COG2856	MGAS10270_S py0800	MGAS10270_S py0801	–	–
<i>Streptococcus pyogenes</i> MGAS10270	-/-	MGAS10270_S py1346	MGAS10270_S py1347	–	–
<i>Streptococcus pyogenes</i> MGAS10270	-/Xre-COG2856	MGAS10270_S py1359	MGAS10270_S py1358	–	–
<i>Streptococcus pyogenes</i> MGAS10270	-/Xre-COG2856	MGAS10270_S py1405	MGAS10270_S py1404	–	–
<i>Streptococcus pyogenes</i> MGAS10270	mazEF, ccd or relBE/RHH-MazF	MGAS10270_S py1407	MGAS10270_S py1408	–	–
<i>Streptococcus pyogenes</i> MGAS10270	RelBE or parDE/RHH-RelE	MGAS10270_S py1710	MGAS10270_S py1709	–	–

<i>Streptococcus pyogenes</i> MGAS10270	RelBE or parDE/RHH-RelE	MGAS10270_S py1927	MGAS10270_S py1928	-	-
<i>Streptococcus pyogenes</i> MGAS10750	RelBE or parDE/RHH-RelE	MGAS10750_S py0477	MGAS10750_S py0475	-	-
<i>Streptococcus pyogenes</i> MGAS10750	hicBA/HicB-HicA	MGAS10750_S py0594	MGAS10750_S py0593	-	-
<i>Streptococcus pyogenes</i> MGAS10750	-/Xre-COG2856	MGAS10750_S py0835	MGAS10750_S py0836	-	-
<i>Streptococcus pyogenes</i> MGAS10750	-/Xre-COG2856	MGAS10750_S py1713	MGAS10750_S py1714	-	-
<i>Streptococcus pyogenes</i> MGAS10750	RelBE or parDE/RHH-RelE	MGAS10750_S py1738	MGAS10750_S py1737	-	-
<i>Streptococcus pyogenes</i> MGAS10750	-/Xre-Bro	MGAS10750_S py1901	MGAS10750_S py1900	-	-
<i>Streptococcus pyogenes</i> MGAS2096	RelBE or parDE/RHH-RelE	MGAS2096_S py0476	MGAS2096_S py0475	-	-
<i>Streptococcus pyogenes</i> MGAS2096	-/Xre-COG2856	MGAS2096_S py1490	MGAS2096_S py1489	-	-
<i>Streptococcus pyogenes</i> MGAS2096	RelBE or parDE/RHH-RelE	MGAS2096_S py1666	MGAS2096_S py1665	-	-
<i>Streptococcus pyogenes</i> MGAS315	parDE/RHH-RelE	SpyM3_0394	SpyM3_0393	-	-
<i>Streptococcus pyogenes</i> MGAS315	-/Xre-COG2856	SpyM3_0683	SpyM3_0684	-	-
<i>Streptococcus pyogenes</i> MGAS315	-/Xre-Bro	SpyM3_0687	SpyM3_0688	-	-
<i>Streptococcus pyogenes</i> MGAS315	-/Xre-COG2856	SpyM3_1264	SpyM3_1263	-	-
<i>Streptococcus pyogenes</i> MGAS315	-/Xre-COG2856	SpyM3_1351	SpyM3_1350	-	-
<i>Streptococcus pyogenes</i> MGAS315	-/Xre-COG2856	SpyM3_1456	SpyM3_1455	-	-
<i>Streptococcus pyogenes</i> MGAS315	parDE/RHH-RelE	SpyM3_1662	SpyM3_1661	-	-
<i>Streptococcus pyogenes</i> MGAS5005	RelBE or parDE/RHH-RelE	M5005_Spy_0457	M5005_Spy_0456	-	-
<i>Streptococcus pyogenes</i> MGAS5005	-/Xre-COG2856	M5005_Spy_1220	M5005_Spy_1219	-	-

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<i>Streptococcus pyogenes</i> MGAS5005	-/Xre-COG2856	M5005_Spy_1465	M5005_Spy_1464	-	-
<i>Streptococcus pyogenes</i> MGAS5005	RelBE or parDE/RHH-RelE	M5005_Spy_1641	M5005_Spy_1640	-	-
<i>Streptococcus pyogenes</i> MGAS6180	RelBE or parDE/RHH-RelE	M28_Spy0445	M28_Spy0444	-	-
<i>Streptococcus pyogenes</i> MGAS6180	mazEF/Xre-MazF	M28_Spy1031	M28_Spy1030	-	-
<i>Streptococcus pyogenes</i> MGAS6180	-/Xre-COG2856	M28_Spy1283	M28_Spy1282	-	-
<i>Streptococcus pyogenes</i> MGAS6180	-/Xre-COG2856	M28_Spy1331	M28_Spy1330	-	-
<i>Streptococcus pyogenes</i> MGAS6180	mazEF, ccd or relBE/RHH-MazF	M28_Spy1333	M28_Spy1334	-	-
<i>Streptococcus pyogenes</i> MGAS6180	RelBE or parDE/RHH-RelE	M28_Spy1631	M28_Spy1630	-	-
<i>Streptococcus pyogenes</i> MGAS6180	RelBE or parDE/RHH-RelE	M28_Spy1840	M28_Spy1841	-	-
<i>Streptococcus pyogenes</i> MGAS8232	-/Xre-COG2856	spyM18_0339	spyM18_0340	-	-
<i>Streptococcus pyogenes</i> MGAS8232	-/Xre-Bro	spyM18_0344	spyM18_0345	-	-
<i>Streptococcus pyogenes</i> MGAS8232	parDE/RHH-RelE	spyM18_0617	spyM18_0616	-	-
<i>Streptococcus pyogenes</i> MGAS8232	-/Xre-Bro	spyM18_0723	spyM18_0722	-	-
<i>Streptococcus pyogenes</i> MGAS8232	hicBA/HicB-HicA	spyM18_0747	spyM18_0746	-	-
<i>Streptococcus pyogenes</i> MGAS8232	mazEF/Xre-MazF	spyM18_1307	spyM18_1306	-	-
<i>Streptococcus pyogenes</i> MGAS8232	-/Xre-Bro	spyM18_1802	spyM18_1804	-	-
<i>Streptococcus pyogenes</i> MGAS8232	parDE/RHH-RelE	spyM18_1995	spyM18_1994	-	-
<i>Streptococcus pyogenes</i> MGAS9429	RelBE or parDE/RHH-RelE	MGAS9429_Spy0456	MGAS9429_Spy0455	-	-
<i>Streptococcus pyogenes</i> MGAS9429	hicBA/HicB-HicA	MGAS9429_Spy0565	MGAS9429_Spy0564	-	-

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<i>Streptococcus pyogenes</i> MGAS9429	-/Xre-Bro	MGAS9429_Spy0799	MGAS9429_Spy0798	-	-
<i>Streptococcus pyogenes</i> MGAS9429	-/Xre-COG2856	MGAS9429_Spy1467	MGAS9429_Spy1466	-	-
<i>Streptococcus pyogenes</i> MGAS9429	RelBE or parDE/RHH-RelE	MGAS9429_Spy1644	MGAS9429_Spy1643	-	-
<i>Streptococcus pyogenes</i> SSI-1	-/Xre-COG2856	SPs0410	SPs0411	-	-
<i>Streptococcus pyogenes</i> SSI-1	-/Xre-COG2856	SPs0513	SPs0514	-	-
<i>Streptococcus pyogenes</i> SSI-1	-/Xre-COG2856	SPs0599	SPs0600	-	-
<i>Streptococcus pyogenes</i> SSI-1	-/Xre-Bro	SPs1163	SPs1162	-	-
<i>Streptococcus pyogenes</i> SSI-1	-/Xre-COG2856	SPs1169	SPs1168	-	-
<i>Streptococcus pyogenes</i> SSI-1	parDE/RHH-RelE	SPs1460	SPs1461	-	-
<i>Streptococcus pyogenes</i> SSI-1	parDE/RHH-RelE	SPs1660	SPs1659	-	-
<i>Streptococcus pyogenes</i> str. Manfredo	-/Xre-COG2856	SpyM50473	SpyM50474	-	-
<i>Streptococcus pyogenes</i> str. Manfredo	-/Xre-Bro	SpyM50476	SpyM50475	-	-
<i>Streptococcus pyogenes</i> str. Manfredo	-/Xre-COG2856	SpyM50633	SpyM50634	-	-
<i>Streptococcus pyogenes</i> str. Manfredo	-/Xre-COG2856	SpyM51068	SpyM51067	-	-
<i>Streptococcus pyogenes</i> str. Manfredo	hicBA/HicB-HicA	SpyM51292	SpyM51293	-	-
<i>Streptococcus pyogenes</i> str. Manfredo	-/Xre-Bro	SpyM51316	SpyM51317	-	-
<i>Streptococcus pyogenes</i> str. Manfredo	RelBE or parDE/RHH-RelE	SpyM51406	SpyM51407	-	-
<i>Streptococcus pyogenes</i> str. Manfredo	RelBE or parDE/RHH-RelE	SpyM51616	SpyM51615	-	-
<i>Streptococcus pyogenes</i> (plasmid)	omega-epsilon-zeta/-	pSM19035_009	pSM19035_008	pSM19035_007	o

<i>Streptococcus pyogenes</i> (plasmid)	omega-epsilon-zeta/-	pSM19035_012	pSM19035_013	pSM19035_014	o
<i>Streptococcus pyogenes</i> (plasmid)	-/-	pSM19035_013	pSM19035_012	-	-
<i>Streptococcus pneumoniae</i>	pezAT/(antitoxin)	Orf8	Orf9	-	-
<i>Streptococcus pneumoniae</i> CGSP14	RelBE or parDE/RHH-RelE	SPCG_0287	SPCG_0286	-	-
<i>Streptococcus pneumoniae</i> CGSP14	phd-doc/AbrB-Fic	SPCG_0839	SPCG_0838	-	-
<i>Streptococcus pneumoniae</i> CGSP14	RelBE or parDE/RHH-RelE	SPCG_1079	SPCG_1078	-	-
<i>Streptococcus pneumoniae</i> CGSP14	relBE or parDE/PHD-RelE	SPCG_1714	SPCG_1715	-	-
<i>Streptococcus pneumoniae</i> CGSP14	-/Xre-COG2856	SPCG_1910	SPCG_1965	-	-
<i>Streptococcus pneumoniae</i> D39	RelBE or parDE/RHH-RelE	SPD_0256	SPD_0255	-	-
<i>Streptococcus pneumoniae</i> D39	RelBE or parDE/RHH-RelE	SPD_1081	SPD_1082	-	-
<i>Streptococcus pneumoniae</i> D39	relBE or parDE/PHD-RelE	SPD_1550	SPD_1551	-	-
<i>Streptococcus pneumoniae</i> G54	RelBE or parDE/RHH-RelE	SPG_0259	SPG_0258	-	-
<i>Streptococcus pneumoniae</i> G54	phd-doc/AbrB-Fic	SPG_0815	SPG_0814	-	-
<i>Streptococcus pneumoniae</i> G54	RelBE or parDE/RHH-RelE	SPG_1114	SPG_1115	-	-
<i>Streptococcus pneumoniae</i> G54	hicBA/HicB-HicA	SPG_1676	SPG_1675	-	-
<i>Streptococcus pneumoniae</i> G54	-/Xre-COG2856	SPG_1845	SPG_1846	-	-
<i>Streptococcus pneumoniae</i> gamPNI0373	omega-epsilon-zeta/(antitoxin)	HMPREF1038_01132	HMPREF1038_01133	-	-
<i>Streptococcus pneumoniae</i> Hungary19A-6	-/Xre-Bro	SPH_0034	SPH_0035	-	-
<i>Streptococcus pneumoniae</i> Hungary19A-6	-/Xre-COG2856	SPH_0072	SPH_0073	-	-
<i>Streptococcus pneumoniae</i> Hungary19A-6	-/Xre-Bro	SPH_0075	SPH_0074	-	-
<i>Streptococcus pneumoniae</i> Hungary19A-6	RelBE or parDE/RHH-RelE	SPH_0392	SPH_0391	-	-
<i>Streptococcus pneumoniae</i> Hungary19A-6	phd-doc/AbrB-Fic	SPH_0995	SPH_0994	-	-
<i>Streptococcus pneumoniae</i> Hungary19A-6	RelBE or parDE/RHH-RelE	SPH_1337	SPH_1338	-	-
<i>Streptococcus pneumoniae</i> Hungary19A-6	relBE or parDE/PHD-RelE	SPH_1849	SPH_1850	-	-
<i>Streptococcus pneumoniae</i> Hungary19A-6	hicBA/HicB-HicA	SPH_1904	SPH_1903	-	-
<i>Streptococcus pneumoniae</i> Hungary19A-6	-/Xre-COG2856	SPH_2084	SPH_2086	-	-

<i>Streptococcus pneumoniae</i> R6	relBE/RHH-RelE	spr0253	spr0252	-	-
<i>Streptococcus pneumoniae</i> R6	relBE/RHH-RelE	spr1103	spr1104	-	-
<i>Streptococcus pneumoniae</i> R6	relBE/PHD-RelE	spr1585	spr1586	-	-
<i>Streptococcus pneumoniae</i> R6	hicBA/HicB-HicA	spr1613	spr1612	-	-
<i>Streptococcus pneumoniae</i> R6	-/Xre-COG2856	spr1752	spr1753	-	-
<i>Streptococcus pneumoniae</i> TIGR4	relBE/RHH-RelE	SP_0276	SP_0275	-	-
<i>Streptococcus pneumoniae</i> TIGR4	phd-doc/AbrB-Fic	SP_0889	SP_0888	-	-
<i>Streptococcus pneumoniae</i> TIGR4	higBA/Xre-RelE	SP_1143	SP_1144	-	-
<i>Streptococcus pneumoniae</i> TIGR4	relBE/RHH-RelE	SP_1223	SP_1224	-	-
<i>Streptococcus pneumoniae</i> TIGR4	relBE/PHD-RelE	SP_1740	SP_1741	-	-
<i>Streptococcus pneumoniae</i> TIGR4	hicBA/HicB-HicA	SP_1787	SP_1786	-	-
<i>Streptococcus pneumoniae</i> TIGR4	-/Xre-COG2856	SP_1935	SP_1936	-	-
<i>Enterococcus faecalis</i> (plasmid)	-/-	pJHW9-2_006	pJHW9-2_005	-	-
<i>Enterococcus faecalis</i> V583	-/Xre-COG2856	EF0128	EF0129	-	-
<i>Enterococcus faecalis</i> V583	-/HEPN-MNT	EF0137	EF0138	-	-
<i>Enterococcus faecalis</i> V583	-/Xre-COG2856	EF0305	EF0306	-	-
<i>Enterococcus faecalis</i> V583	phd-doc/AbrB-Fic	EF0379	EF0380	-	-
<i>Enterococcus faecalis</i> V583	relBE/RHH-RelE	EF0513	EF0512	-	-
<i>Enterococcus faecalis</i> V583	-/Xre-COG2856	EF1276	EF1277	-	-
<i>Enterococcus faecalis</i> V583	-/Xre-COG2856	EF1421	EF1422	-	-
<i>Enterococcus faecalis</i> V583	-/Xre-COG2856	EF2041	EF2040	-	-
<i>Enterococcus faecalis</i> V583	-/Xre-COG2856	EF2143	EF2142	-	-
<i>Enterococcus faecalis</i> V583	-/HEPN-MNT	EF2535	EF2534	-	-
<i>Enterococcus faecalis</i> V583	-/Xre-COG2856	EF2545	EF2544	-	-
<i>Enterococcus faecalis</i> V583	-/Xre-COG2856	EF2853	EF2852	-	-
<i>Enterococcus faecalis</i> V583	mazEF/AbrB-MazF	EF3262	EF3261	-	-
<i>Enterococcus faecalis</i> V583	RelBE or parDE/RHH-RelE	EFA0066	EFA0065	-	-
<i>Enterococcus faecalis</i> V583	mazEF/AbrB-MazF	EFA0071	EFA0072	-	-
<i>Staphylococcus aureus</i> (plasmid)	omega-epsilon-zeta/-	zeta	epsilon	-	o
<i>Staphylococcus aureus</i> (plasmid)	mazEF/AbrB-MazF	SACH_a18	SACH_a19	-	o
<i>Staphylococcus aureus</i> RF122	-/Xre-Bro	SAB1755c	SAB1756c	-	-
<i>Staphylococcus aureus</i> RF122	mazEF, ccd or relBE/RHH-MazF	SAB1953c	SAB1954c	-	-
<i>Staphylococcus aureus</i> RF122	relBE or parDE/PHD-RelE	SAB2287c	SAB2288c	-	-

<i>Staphylococcus aureus</i> RF122	relBE or parDE/PHD- RelE	SAB2339c	SAB2340c	-	-
<i>Staphylococcus aureus</i> subsp. <i>aureus</i> COL	-/Xre-COG2856	SACOL0889	SACOL0890	-	-
<i>Staphylococcus aureus</i> subsp. <i>aureus</i> COL	mazEF/RHH-MazF	SACOL2058	SACOL2059	-	-
<i>Staphylococcus aureus</i> subsp. <i>aureus</i> COL	relBE/PHD-RelE	SACOL2404	SACOL2405	-	-
<i>Staphylococcus aureus</i> subsp. <i>aureus</i> COL	relBE/PHD-RelE	SACOL2464	SACOL2465	-	-
<i>Staphylococcus aureus</i> subsp. <i>aureus</i> MRSA252	-/Xre-COG2856	SAR1557	SAR1556	-	-
<i>Staphylococcus aureus</i> subsp. <i>aureus</i> MRSA252	mazEF/RHH-MazF	SAR2156	SAR2157	-	-
<i>Staphylococcus aureus</i> subsp. <i>aureus</i> MRSA252	relBE/PHD-RelE	SAR2497	SAR2498	-	-
<i>Staphylococcus aureus</i> subsp. <i>aureus</i> MSSA476	-/Xre-COG2856	SAS0896	SAS0897	-	-
<i>Staphylococcus aureus</i> subsp. <i>aureus</i> MSSA476	mazEF/RHH-MazF	SAS1973	SAS1974	-	-
<i>Staphylococcus aureus</i> subsp. <i>aureus</i> MSSA476	relBE/PHD-RelE	SAS2298	SAS2299	-	-
<i>Staphylococcus aureus</i> subsp. <i>aureus</i> MSSA476	relBE/PHD-RelE	SAS2348	SAS2349	-	-
<i>Staphylococcus aureus</i> subsp. <i>aureus</i> Mu3	-/Xre-COG2856	SAHV_0846	SAHV_0847	-	-
<i>Staphylococcus aureus</i> subsp. <i>aureus</i> Mu3	mazEF, ccd or relBE/RHH-MazF	SAHV_2053	SAHV_2054	-	-
<i>Staphylococcus aureus</i> subsp. <i>aureus</i> Mu3	relBE or parDE/PHD- RelE	SAHV_2391	SAHV_2392	-	-
<i>Staphylococcus aureus</i> subsp. <i>aureus</i> Mu3	relBE or parDE/PHD- RelE	SAHV_2440	SAHV_2441	-	-
<i>Staphylococcus aureus</i> subsp. <i>aureus</i> Mu50	-/Xre-COG2856	SAV0850	SAV0851	-	-
<i>Staphylococcus aureus</i> subsp. <i>aureus</i> Mu50	mazEF/RHH-MazF	SAV2068	SAV2069	-	-
<i>Staphylococcus aureus</i> subsp. <i>aureus</i> Mu50	relBE/PHD-RelE	SAV2407	SAV2408	-	-
<i>Staphylococcus aureus</i> subsp. <i>aureus</i> Mu50	relBE/PHD-RelE	SAV2456	SAV2457	-	-
<i>Staphylococcus aureus</i> subsp. <i>aureus</i> MW2	-/Xre-COG2856	MW1437	MW1436	-	-
<i>Staphylococcus aureus</i> subsp. <i>aureus</i> MW2	mazEF/RHH-MazF	MW1992	MW1993	-	-
<i>Staphylococcus aureus</i> subsp. <i>aureus</i> MW2	relBE/PHD-RelE	MW2329	MW2330	-	-
<i>Staphylococcus aureus</i> subsp. <i>aureus</i> MW2	relBE/PHD-RelE	MW2380	MW2381	-	-
<i>Staphylococcus aureus</i> subsp. <i>aureus</i> N315	mazEF/RHH-MazF	SA1873	SAS067	-	-
<i>Staphylococcus aureus</i> subsp. <i>aureus</i> N315	relBE/PHD-RelE	SA2195	SA2196	-	-
<i>Staphylococcus aureus</i> subsp. <i>aureus</i> N315	relBE/PHD-RelE	SA2245	SA2246	-	-
<i>Staphylococcus aureus</i> subsp. <i>aureus</i> NCTC 8325	mazEF, ccd or relBE/RHH-MazF	SAOUHSC_02 303	SAOUHSC_02 304	-	-

<i>Staphylococcus aureus</i> subsp. <i>aureus</i> NCTC 8325	relBE or parDE/PHD- RelE	SAOUHSC_02 691	SAOUHSC_02 692	-	-
<i>Staphylococcus aureus</i> subsp. <i>aureus</i> NCTC 8325	relBE or parDE/PHD- RelE	SAOUHSC_02 756	SAOUHSC_02 757	-	-
<i>Staphylococcus aureus</i> subsp. <i>aureus</i> str. Newman	-/Xre-COG2856	NWMN_0265	NWMN_0266	-	-
<i>Staphylococcus aureus</i> subsp. <i>aureus</i> USA300 TCH1516	-/Xre-COG2856	USA300HOU_ 0853	USA300HOU_ 0854	-	-
<i>Staphylococcus aureus</i> subsp. <i>aureus</i> USA300 TCH1516	-/Xre-COG2856	USA300HOU_ 1487	USA300HOU_ 1486	-	-
<i>Staphylococcus aureus</i> subsp. <i>aureus</i> USA300 TCH1516	mazEF, ccd or relBE/RHH-MazF	USA300HOU_ 2063	USA300HOU_ 2064	-	-
<i>Staphylococcus aureus</i> subsp. <i>aureus</i> USA300 TCH1516	relBE or parDE/PHD- RelE	USA300HOU_ 2387	USA300HOU_ 2388	-	-
<i>Staphylococcus aureus</i> subsp. <i>aureus</i> USA300 TCH1516	relBE or parDE/PHD- RelE	USA300HOU_ 2446	USA300HOU_ 2447	-	-
<i>Neisseria gonorrhoeae</i> FA 1090	mazEF/AbrB-MazF	NGO0516	NGO0517	-	-
<i>Neisseria gonorrhoeae</i> FA 1090	vapBC/RHH-PIN	NGO0907	NGO0908	-	-
<i>Neisseria gonorrhoeae</i> FA 1090	hicBA/HicB-HicA	NGO1628	NGO1627	-	-
<i>Neisseria gonorrhoeae</i> NCCP11945	relBE/Xre-RelE	NGK_0018	NGK_0017	-	-
<i>Neisseria gonorrhoeae</i> NCCP11945	vapBC/RHH-PIN	NGK_0895	NGK_0894	-	-
<i>Neisseria gonorrhoeae</i> NCCP11945	-/RHH-GNAT	NGK_1047	NGK_1046	-	-
<i>Neisseria gonorrhoeae</i> NCCP11945	relBE/AbrB-RelE	NGK_1059	NGK_1058	-	-
<i>Neisseria gonorrhoeae</i> NCCP11945	relBE/Xre-RelE	NGK_1160	NGK_1159	-	-
<i>Neisseria gonorrhoeae</i> NCCP11945	mazEF/AbrB-MazF	NGK_1418	NGK_1417	-	-
<i>Neisseria gonorrhoeae</i> NCCP11945	hicBA/HicB-HicA	NGK_1459	NGK_1460	-	-
<i>Rickettsia felis</i> URRWXCal2	relBE or parDE/PHD- RelE	RF_0016	RF_0015	-	-
<i>Rickettsia felis</i> URRWXCal2	vapBC/AbrB-PIN	RF_0095	RF_0094	-	-
<i>Rickettsia felis</i> URRWXCal2	-/RHH-COG2929	RF_0168	RF_0169	-	-
<i>Rickettsia felis</i> URRWXCal2	hicBA/HicB-HicA	RF_0215	RF_0216	-	-
<i>Rickettsia felis</i> URRWXCal2	vapBC/PHD-PIN	RF_0271	RF_0272	-	-
<i>Rickettsia felis</i> URRWXCal2	-/RHH-COG2929	RF_0312	RF_0311	-	-
<i>Rickettsia felis</i> URRWXCal2	RelBE or parDE/RHH- RelE	RF_0334	RF_0335	-	-
<i>Rickettsia felis</i> URRWXCal2	-/HEPN-MNT	RF_0356	RF_0357	-	-
<i>Rickettsia felis</i> URRWXCal2	vapBC/PHD-PIN	RF_0456	RF_0457	-	-
<i>Rickettsia felis</i> URRWXCal2	relBE or parDE/PHD- RelE	RF_0490	RF_0489	-	-



<i>Rickettsia felis</i> URRWXCal2	relBE or parDE/PHD- RelE	RF_0602	RF_0601	-	-
<i>Rickettsia felis</i> URRWXCal2	vapBC/PHD-PIN	RF_0701	RF_0702	-	-
<i>Rickettsia felis</i> URRWXCal2	vapBC/PHD-PIN	RF_0732	RF_0731	-	-
<i>Rickettsia felis</i> URRWXCal2	-/HEPN-MNT	RF_0754	RF_0753	-	-
<i>Rickettsia felis</i> URRWXCal2	relBE or parDE/PHD- RelE	RF_0787	RF_0788	-	-
<i>Rickettsia felis</i> URRWXCal2	RelBE or parDE/RHH- RelE	RF_0898	RF_0899	-	-
<i>Rickettsia felis</i> URRWXCal2	relBE or parDE/PHD- RelE	RF_0911	RF_0910	-	-
<i>Rickettsia felis</i> URRWXCal2	RelBE or parDE/RHH- RelE	RF_0956	RF_0957	-	-
<i>Rickettsia felis</i> URRWXCal2	vapBC/AbrB-PIN	RF_1206	RF_1207	-	-
<i>Rickettsia felis</i> URRWXCal2	RelBE or parDE/RHH- RelE	RF_1272	RF_1273	-	-
<i>Rickettsia felis</i> URRWXCal2	-/HEPN-MNT	RF_1280	RF_1279	-	-
<i>Rickettsia felis</i> URRWXCal2	relBE/Xre-RelE	RF_1286	RF_1287	-	-
<i>Rickettsia felis</i> URRWXCal2	relBE/Xre-RelE	RF_1317	RF_1316	-	-
<i>Rickettsia felis</i> URRWXCal2	mazEF, ccd or relBE/RHH-MazF	RF_1343	RF_1342	-	-
<i>Rickettsia felis</i> URRWXCal2	relBE or parDE/PHD- RelE	RF_1368	RF_1369	-	-
<i>Shigella flexneri</i> 2a str. 2457T	-/RHH-GNAT	S4812	S0373	-	-
<i>Shigella flexneri</i> 2a str. 2457T	relBE/RHH-RelE	S1669	S1670	-	-
<i>Shigella flexneri</i> 2a str. 2457T	relBE/Xre-RelE	S3330	S3329	-	-
<i>Shigella flexneri</i> 2a str. 2457T	-/YhfG-Fic	S4383	S4382	-	-
<i>Shigella flexneri</i> 2a str. 301	-/RHH-GNAT	SF0367	SF0368	-	-
<i>Shigella flexneri</i> 2a str. 301	relBE/RHH-RelE	SF1548	SF1549	-	-
<i>Shigella flexneri</i> 2a str. 301	relBE/-	SF2076	SF2079	-	-
<i>Shigella flexneri</i> 2a str. 301	relBE/Xre-RelE	SF3123	SF3122	-	-
<i>Shigella flexneri</i> 2a str. 301	-/YhfG-Fic	SF3380	SF3381	-	-
<i>Shigella flexneri</i> 2a str. 301	mazEF/AbrB-MazF	SF3434	SF3433	-	-
<i>Shigella flexneri</i> 2b	parD (pem)/-	R100p114	R100p113	-	o
<i>Shigella flexneri</i> 5a str. M90T	vapBC/PHD-PIN	pWR501_0259	pWR501_0258	-	o
<i>Shigella flexneri</i> 5 str. 8401	-/RHH-GNAT	SFV_0397	SFV_0398	-	-
<i>Shigella flexneri</i> 5 str. 8401	relBE/Xre-RelE	SFV_3124	SFV_3123	-	-
<i>Shigella flexneri</i> 5 str. 8401	-/YhfG-Fic	SFV_3367	SFV_3368	-	-
<i>Escherichia coli</i> O157:H7 str. EDL933	ccd/RHH-MazF	Z0057	Z0056	-	o
<i>Escherichia coli</i> O157:H7 str. EDL933	RelBE or parDE/RHH- RelE	Z0284	Z0285	-	-

<i>Escherichia coli</i> O157:H7 str. EDL933	parDE/RHH-RelE	Z0510	Z0509	-	o
<i>Escherichia coli</i> O157:H7 str. EDL933	relBE/Xre-RelE	Z1060	Z1059	-	-
<i>Escherichia coli</i> O157:H7 str. EDL933	higBA/COG5606-RelE	Z3230	Z3231	-	-
<i>Escherichia coli</i> O157:H7 str. EDL933	mazEF/AbrB-MazF	Z4097	Z4098	-	-
<i>Escherichia coli</i> O157:H7 str. EDL933	relBE/Xre-RelE	Z4436	Z4435	-	-
<i>Escherichia coli</i> O157:H7 str. EDL933	prfF-yhaV/AbrB-RelE	Z4482	Z4481	-	-
<i>Escherichia coli</i> O157:H7 str. EDL933	-/YhfG-Fic	Z4722	Z4723	-	-
<i>Escherichia coli</i> O157:H7 str. EDL933	-/RHH-GNAT	Z4777	Z4776	-	-
<i>Escherichia coli</i> O157:H7 str. EDL933	-/RHH-GNAT	Z4832	Z4833	-	-
<i>Escherichia coli</i> O157:H7 str. EDL933	hicBA/HicB-HicA	Z4883	Z4882	-	-
<i>Escherichia coli</i> O157:H7 str. EDL933	relBE/Xre-RelE	Z5150	Z5151	-	-
<i>Escherichia coli</i> O157:H7 str. EDL933	mazEF/AbrB-MazF	Z5836	Z5835	-	-
<i>Escherichia coli</i> O157:H7 str. Sakai	-/-	pOSAK1_02	pOSAK1_03	-	o
<i>Escherichia coli</i> O157:H7 str. Sakai	mazEF, ccd or relBE/RHH-MazF	pO157p29	pO157p28	-	-
<i>Escherichia coli</i> O157:H7 str. Sakai	RelBE or parDE/RHH- RelE	pO157p70	pO157p69	-	-
<i>Escherichia coli</i> O157:H7 str. Sakai	ccd/RHH-MazF	ECs0053	ECs0052	-	-
<i>Escherichia coli</i> O157:H7 str. Sakai	relBE/RHH-RelE	ECs0252	ECs0253	-	-
<i>Escherichia coli</i> O157:H7 str. Sakai	parDE/RHH-RelE	ECs0462	ECs0461	-	-
<i>Escherichia coli</i> O157:H7 str. Sakai	relBE/Xre-RelE	ECs5400	ECs5399	-	-
<i>Escherichia coli</i> O157:H7 str. Sakai	paaR-paaA-parE/RHH- RelE	ECs1067	ECs1068	ECs1069	o
<i>Escherichia coli</i> O157:H7 str. Sakai	paaR-paaA-parE/RHH- RelE	ECs2281	ECs2280	ECs2279	o
<i>Escherichia coli</i> O157:H7 str. Sakai	higBA/COG5606-RelE	ECs2869	ECs2870	-	-
<i>Escherichia coli</i> O157:H7 str. Sakai	mazEF/AbrB-MazF	ECs3642	ECs3643	-	-
<i>Escherichia coli</i> O157:H7 str. Sakai	relBE/Xre-RelE	ECs3965	ECs3964	-	-
<i>Escherichia coli</i> O157:H7 str. Sakai	prfF-yhaV/AbrB-RelE	ECs4008	ECs4007	-	-
<i>Escherichia coli</i> O157:H7 str. Sakai	-/YhfG-Fic	ECs4212	ECs4213	-	-
<i>Escherichia coli</i> O157:H7 str. Sakai	-/RHH-GNAT	ECs4262	ECs4261	-	-

<i>Escherichia coli</i> O157:H7 str. Sakai	-/RHH-GNAT	ECs4307	ECs4308	-	-
<i>Escherichia coli</i> O157:H7 str. Sakai	hicBA/HicB-HicA	ECs4357	ECs4356	-	-
<i>Escherichia coli</i> O157:H7 str. Sakai	relBE/Xre-RelE	ECs4597	ECs4598	-	-
<i>Escherichia coli</i> O157:H7 str. Sakai	mazEF/AbrB-MazF	ECs5203	ECs5202	-	-
<i>Vibrio fischeri</i> ES114	hipBA/Xre-HipA	VF_1470	VF_1469	-	-
<i>Vibrio fischeri</i> MJ11	relBE/Xre-RelE	VFMJ11_1428	VFMJ11_1427	-	-
<i>Vibrio fischeri</i> MJ11	hipBA/Xre-HipA	VFMJ11_1565	VFMJ11_1564	-	-
<i>Vibrio fischeri</i> MJ11	hipBA/Xre-HipA	VFMJ11_2144	VFMJ11_2145	-	-
<i>Vibrio cholerae</i> MJ-1236	mosAT/-	VCD_003702	VCD_003703	-	o
<i>Vibrio cholerae</i> O1 biovar El Tor str. N16961	parDE/PHD-RelE	VCA0311	VCA0312	-	o
<i>Vibrio cholerae</i> O1 biovar El Tor str. N16961	-/RHH-GNAT	VCA0318	VCA0319	-	-
<i>Vibrio cholerae</i> O1 biovar El Tor str. N16961	relBE/RHH-RelE	VCA0323	VCA0324	-	-
<i>Vibrio cholerae</i> O1 biovar El Tor str. N16961	-/RHH-COG2929	VCA0332	VCA0333	-	-
<i>Vibrio cholerae</i> O1 biovar El Tor str. N16961	-/RHH-COG2929(toxin)	VCA0348		-	-
<i>Vibrio cholerae</i> O1 biovar El Tor str. N16961	parDE/-	VCA0359	VCA0360	-	o
<i>Vibrio cholerae</i> O1 biovar El Tor str. N16961	parDE/PHD-RelE	VCA0385	VCA0386	-	o
<i>Vibrio cholerae</i> O1 biovar El Tor str. N16961	higBA/Xre-RelE	VCA0391	VCA0392	-	o
<i>Vibrio cholerae</i> O1 biovar El Tor str. N16961	relBE/PHD-RelE	VCA0423	VCA0422	-	-
<i>Vibrio cholerae</i> O1 biovar El Tor str. N16961	relBE/PHD-RelE	VCA0444	VCA0445	-	-
<i>Vibrio cholerae</i> O1 biovar El Tor str. N16961	higBA/Xre-RelE	VCA0468	VCA0469	-	o
<i>Vibrio cholerae</i> O1 biovar El Tor str. N16961	relBE/PHD-RelE	VCA0478	VCA0477	-	-
<i>Vibrio cholerae</i> O1 biovar El Tor str. N16961	-/RHH-GNAT	VCA0481	VCA0482	-	-
<i>Vibrio cholerae</i> O1 biovar El Tor str. N16961	-/RHH-GNAT(toxin)	VCA0487		-	-
<i>Vibrio cholerae</i> O1 biovar El Tor str. N16961	relBE/PHD-RelE	VCA0489	VCA0488	-	-
<i>Vibrio cholerae</i> O1 biovar El Tor str. N16961	-/PHD-RelE(toxin)	VCA0503		-	-

<i>Vibrio cholerae</i> O395	RelBE or parDE/RHH-RelE	VC0395_0757	VC0395_0756	-	-
<i>Vibrio cholerae</i> O395	-/RHH-GNAT	VC0395_0759	VC0395_0760	-	-
<i>Vibrio cholerae</i> O395	-/RHH-GNAT	VC0395_0765	VC0395_0764	-	-
<i>Vibrio cholerae</i> O395	relBE or parDE/PHD-RelE	VC0395_0794	VC0395_0795	-	-
<i>Vibrio cholerae</i> O395	relBE/Xre-RelE	VC0395_0804	VC0395_0803	-	-
<i>Vibrio cholerae</i> O395	relBE or parDE/PHD-RelE	VC0395_0823	VC0395_0822	-	-
<i>Vibrio cholerae</i> O395	relBE or parDE/PHD-RelE	VC0395_0849	VC0395_0850	-	-
<i>Vibrio cholerae</i> O395	relBE or parDE/PHD-RelE	VC0395_0861	VC0395_0862	-	-
<i>Vibrio cholerae</i> O395	-/RHH-GNAT	VC0395_0916	VC0395_0915	-	-
<i>Vibrio cholerae</i> O395	relBE/Xre-RelE	VC0395_0930	VC0395_0929	-	-
<i>Vibrio cholerae</i> O395	relBE or parDE/PHD-RelE	VC0395_0937	VC0395_0936	-	-
<i>Vibrio cholerae</i> O395	hipBA/Xre-HipA	VC0395_A0340	VC0395_A0339	-	-
<i>Vibrio parahaemolyticus</i> RIMD 2210633	hipBA/Xre-HipA	VP0402	VP0403	-	-
<i>Vibrio parahaemolyticus</i> RIMD 2210633	relBE/PHD-RelE	VP1820	VP1821	-	-
<i>Vibrio parahaemolyticus</i> RIMD 2210633	relBE/RHH-RelE	VP1830	VP1829	-	-
<i>Vibrio parahaemolyticus</i> RIMD 2210633	RelBE or parDE/RHH-RelE	VP1843	VP1842	-	-
<i>Vibrio parahaemolyticus</i> RIMD 2210633	RelBE or parDE/RHH-RelE	VP1843	VP1842	-	o
<i>Vibrio parahaemolyticus</i> RIMD 2210633	parDE/RHH-RelE(antitoxin)	VP1884	VP1885	-	-
<i>Vibrio parahaemolyticus</i> RIMD 2210633	parDE/PHD-RelE	VP1885	VP1886	-	-
<i>Vibrio vulnificus</i> CMCP6	RelBE or parDE/RHH-RelE	VV1_0110	VV1_0111	-	-
<i>Vibrio vulnificus</i> CMCP6	hipBA/Xre-HipA	VV1_0401	VV1_0402	-	-
<i>Vibrio vulnificus</i> CMCP6	hipBA/Xre-HipA	VV1_2047	VV1_2046	-	-
<i>Vibrio vulnificus</i> CMCP6	hipBA/Xre-HipA	VV1_2190	VV1_2191	-	-
<i>Vibrio vulnificus</i> CMCP6	relBE/PHD-RelE	VV1_2410	VV1_2409	-	-
<i>Vibrio vulnificus</i> CMCP6	relBE/PHD-RelE	VV1_2433	VV1_2432	-	-
<i>Vibrio vulnificus</i> CMCP6	parDE/RHH-RelE	VV1_2525	VV1_2526	-	-
<i>Vibrio vulnificus</i> CMCP6	-/RHH-GNAT	VV1_2537	VV1_2538	-	-
<i>Vibrio vulnificus</i> CMCP6	relBE/PHD-RelE	VV1_2547	VV1_2546	-	-
<i>Vibrio vulnificus</i> YJ016	hicBA/HicB-HicA	VVP65	VVP66	-	-
<i>Vibrio vulnificus</i> YJ016	relBE/RHH-RelE	VVA0314	VVA0313	-	-

<i>Brucella abortus</i> bv. 1 str. 9-941	-/Xre-COG2856	BruAb1_0264	BruAb1_0263	-	-
<i>Brucella abortus</i> bv. 1 str. 9-941	RelBE or parDE/RHH-RelE	BruAb1_0430	BruAb1_0431	-	-
<i>Brucella abortus</i> bv. 1 str. 9-941	phd-doc/AbrB-Fic	BruAb1_0579	BruAb1_0580	-	-
<i>Brucella abortus</i> bv. 1 str. 9-941	-/RHH-COG2929	BruAb1_0981	BruAb1_0980	-	-
<i>Brucella abortus</i> S19	-/COG5642-COG5654	BAbS19_II08620	BAbS19_II08610	-	-
<i>Salmonella enterica</i> subsp. <i>enterica</i> serovar <i>Typhimurium</i> str. LT2	relBE/PHD-RelE	STM1550	STM1551	-	-
<i>Salmonella enterica</i> subsp. <i>enterica</i> serovar <i>Typhimurium</i> str. LT2	-/RHH-GNAT	STM2905	STM2904	-	-
<i>Salmonella enterica</i> subsp. <i>enterica</i> serovar <i>Typhimurium</i> str. LT2	RelBE or parDE/RHH-RelE	STM2954.1n	STM2955.S	-	-
<i>Salmonella enterica</i> subsp. <i>enterica</i> serovar <i>Typhimurium</i> str. LT2	vapBC/AbrB-PIN	STM3033	STM3034	-	o
<i>Salmonella enterica</i> subsp. <i>enterica</i> serovar <i>Typhimurium</i> str. LT2	-/YhfG-Fic	STM3470	STM3471	-	-
<i>Salmonella enterica</i> subsp. <i>enterica</i> serovar <i>Typhimurium</i> str. LT2	relBE/RHH-RelE	STM3516	STM3517	-	-
<i>Salmonella enterica</i> subsp. <i>enterica</i> serovar <i>Typhimurium</i> str. LT2	phd-doc/PHD-Fic	STM3558	STM3559	-	o
<i>Salmonella enterica</i> subsp. <i>enterica</i> serovar <i>Typhimurium</i> str. LT2	-/RHH-GNAT	STM3651	STM3652	-	-
<i>Salmonella enterica</i> subsp. <i>enterica</i> serovar <i>Typhimurium</i> str. LT2	relBE/Xre-RelE	STM3777	STM3778	-	-
<i>Salmonella enterica</i> subsp. <i>enterica</i> serovar <i>Typhimurium</i> str. LT2	higBA/COG5606-RelE	STM3906	STM3907	-	-
<i>Salmonella enterica</i> subsp. <i>enterica</i> serovar <i>Typhimurium</i> str. LT2	relBE/Xre-RelE	STM4031	STM4030.S	-	-
<i>Salmonella enterica</i> subsp. <i>enterica</i> serovar <i>Typhimurium</i> str. LT2	relBE/Xre-RelE	STM4031	STM4030.S	-	o
<i>Salmonella enterica</i> subsp. <i>enterica</i> serovar <i>Typhimurium</i> str. LT2	relBE/Xre-RelE	STM4032.2N	STM4033	-	o
<i>Salmonella enterica</i> subsp. <i>enterica</i> serovar <i>Typhimurium</i> str. LT2	relBE/Xre-RelE	STM4032.2N	STM4033	-	-

<i>Salmonella enterica</i> subsp. <i>enterica</i> serovar <i>Typhimurium</i> str. LT2	-/RHH-GNAT	STM4318	STM4317	-	-
<i>Salmonella enterica</i> subsp. <i>enterica</i> serovar <i>Typhimurium</i> str. LT2	relBE/RHH-RelE	STM4450	STM4449	-	-
<i>Salmonella enterica</i> subsp. <i>enterica</i> serovar <i>Typhimurium</i> str. LT2	-/RHH-COG2929	STM4528	STM4529	-	-
<i>Salmonella enterica</i> subsp. <i>enterica</i> serovar <i>Typhimurium</i> str. LT2	-/RHH-COG2929	STM4528	STM4529	-	o
<i>Salmonella enterica</i> subsp. <i>enterica</i> serovar <i>Typhi</i> str. CT18	phd-doc/-	STY1031		-	-
<i>Salmonella enterica</i> subsp. <i>enterica</i> serovar <i>Typhi</i> str. CT18	-/RHH-GNAT	STY3027	STY3026	-	-
<i>Salmonella enterica</i> subsp. <i>enterica</i> serovar <i>Typhi</i> str. CT18	vapBC/AbrB-PIN	STY3182	STY3183	-	-
<i>Salmonella enterica</i> subsp. <i>enterica</i> serovar <i>Typhi</i> str. CT18	higBA/COG5606-RelE	STY3651	STY3650	-	-
<i>Salmonella enterica</i> subsp. <i>enterica</i> serovar <i>Typhi</i> str. CT18	vapBC/RHH-PIN	STY3844	STY3845	-	-
<i>Salmonella enterica</i> subsp. <i>enterica</i> serovar <i>Typhi</i> str. CT18	relBE/Xre-RelE	STY3847	STY3848	-	-
<i>Salmonella enterica</i> subsp. <i>enterica</i> serovar <i>Typhi</i> str. CT18	-/RHH-GNAT	STY4151	STY4150	-	-
<i>Salmonella enterica</i> subsp. <i>enterica</i> serovar <i>Typhi</i> str. CT18	-/YhfG-Fic	STY4326	STY4325	-	-
<i>Salmonella enterica</i> subsp. <i>enterica</i> serovar <i>Typhi</i> str. CT18	-/RHH-GNAT	STY4518	STY4517	-	-
<i>Salmonella enterica</i> subsp. <i>enterica</i> serovar <i>Typhi</i> str. CT18	-/RHH-GNAT	STY4668	STY4667	-	-
<i>Salmonella enterica</i> subsp. <i>enterica</i> serovar <i>Typhi</i> str. CT18	relBE/RHH-RelE	STY4789	STY4788	-	-
<i>Salmonella enterica</i> subsp. <i>enterica</i> serovar <i>Typhi</i> str. CT18	-/RHH-COG2929	STY4886	STY4887	-	-

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<i>Salmonella enterica</i> subsp. <i>enterica</i> serovar <i>Typhi</i> str. Ty2	phd-doc/-	t1909	t1910	-	-
<i>Salmonella enterica</i> subsp. <i>enterica</i> serovar <i>Typhi</i> str. Ty2	-/RHH-GNAT	t2805	t2804	-	-
<i>Salmonella enterica</i> subsp. <i>enterica</i> serovar <i>Typhi</i> str. Ty2	vapBC/AbrB-PIN	t2943	t2944	-	-
<i>Salmonella enterica</i> subsp. <i>enterica</i> serovar <i>Typhi</i> str. Ty2	higBA/COG5606-RelE	t3392	t3391	-	-
<i>Salmonella enterica</i> subsp. <i>enterica</i> serovar <i>Typhi</i> str. Ty2	vapBC/RHH-PIN	t3587	t3588	-	-
<i>Salmonella enterica</i> subsp. <i>enterica</i> serovar <i>Typhi</i> str. Ty2	relBE/Xre-RelE	t3590	t3591	-	-
<i>Salmonella enterica</i> subsp. <i>enterica</i> serovar <i>Typhi</i> str. Ty2	-/RHH-GNAT	t3868	t3867	-	-
<i>Salmonella enterica</i> subsp. <i>enterica</i> serovar <i>Typhi</i> str. Ty2	-/YhfG-Fic	t4035	t4034	-	-
<i>Salmonella enterica</i> subsp. <i>enterica</i> serovar <i>Typhi</i> str. Ty2	-/RHH-GNAT	t4224	t4223	-	-
<i>Salmonella enterica</i> subsp. <i>enterica</i> serovar <i>Typhi</i> str. Ty2	-/RHH-GNAT	t4359	t4358	-	-
<i>Salmonella enterica</i> subsp. <i>enterica</i> serovar <i>Typhi</i> str. Ty2	relBE/RHH-RelE	t4484	t4483	-	-
<i>Salmonella enterica</i> subsp. <i>enterica</i> serovar <i>Typhi</i> str. Ty2	-/RHH-COG2929	t4578	t4579	-	-
<i>Mycobacterium tuberculosis</i> CDC1551	vapBC/RHH-PIN	MT0254	MT0253	-	-
<i>Mycobacterium tuberculosis</i> CDC1551	vapBC/RHH-PIN	MT0289	MT0290	-	-
<i>Mycobacterium tuberculosis</i> CDC1551	vapBC/RHH-PIN	MT0574	MT0575	-	-
<i>Mycobacterium tuberculosis</i> CDC1551	vapBC/PHD-PIN	MT0625	MT0626	-	-
<i>Mycobacterium tuberculosis</i> CDC1551	vapBC/AbrB-PIN	MT0628	MT0629	-	-
<i>Mycobacterium tuberculosis</i> CDC1551	vapBC/RHH-PIN	MT0638	MT0637	-	-
<i>Mycobacterium tuberculosis</i> CDC1551	vapBC/RHH-PIN	MT0646	MT0645.2	-	-
<i>Mycobacterium tuberculosis</i> CDC1551	vapBC/RHH-PIN	MT0652	MT0651	-	-
<i>Mycobacterium tuberculosis</i> CDC1551	vapBC/RHH-PIN	MT0685	MT0686	-	-
<i>Mycobacterium tuberculosis</i> CDC1551	mazEF/RHH-MazF	MT0688	MT0689	-	-

<i>Mycobacterium tuberculosis</i> CDC1551	vapBC/RHH-PIN	MT0690	MT0691	-	-
<i>Mycobacterium tuberculosis</i> CDC1551	vapBC/PHD-PIN	MT0693	MT0692.1	-	-
<i>Mycobacterium tuberculosis</i> CDC1551	vapBC/RHH-PIN	MT0773	MT0772.6	-	-
<i>Mycobacterium tuberculosis</i> CDC1551	-/RHH-GNAT	MT0945	MT0944	-	-
<i>Mycobacterium tuberculosis</i> CDC1551	vapBC/-	MT0988	MT0987	-	-
<i>Mycobacterium tuberculosis</i> CDC1551	mazEF/-	MT1134	MT1135	-	-
<i>Mycobacterium tuberculosis</i> CDC1551	vapBC/RHH-PIN	MT1144	MT1143.1	-	-
<i>Mycobacterium tuberculosis</i> CDC1551	vapBC/RHH-PIN	MT1280	MT1279	-	-
<i>Mycobacterium tuberculosis</i> CDC1551	vapBC/RHH-PIN	MT1441	MT1442	-	-
<i>Mycobacterium tuberculosis</i> CDC1551	mazEF/-	MT1542	MT1541	-	-
<i>Mycobacterium tuberculosis</i> CDC1551	vapBC/RHH-PIN	MT1612	MT1611	-	-
<i>Mycobacterium tuberculosis</i> CDC1551	vapBC/RHH-PIN	MT1761	MT1762	-	-
<i>Mycobacterium tuberculosis</i> CDC1551	vapBC/RHH-PIN	MT1783	MT1782	-	-
<i>Mycobacterium tuberculosis</i> CDC1551	vapBC/RHH-PIN	MT1886	MT1887	-	-
<i>Mycobacterium tuberculosis</i> CDC1551	vapBC/RHH-PIN	MT2003	MT2002	-	-
<i>Mycobacterium tuberculosis</i> CDC1551	relBE/Xre-RelE	MT2004	MT2005	-	-
<i>Mycobacterium tuberculosis</i> CDC1551	parDE/RHH-RelE	MT2008	MT2009	-	-
<i>Mycobacterium tuberculosis</i> CDC1551	vapBC/PHD-PIN	MT2012	MT2013	-	-
<i>Mycobacterium tuberculosis</i> CDC1551	vapBC/RHH-PIN	MT2034	MT2035	-	-
<i>Mycobacterium tuberculosis</i> CDC1551	-/COG5642-COG5654	MT2043	MT2044	-	-
<i>Mycobacterium tuberculosis</i> CDC1551	mazEF/RHH-MazF	MT2046	MT2047	-	-
<i>Mycobacterium tuberculosis</i> CDC1551	vapBC/RHH-PIN	MT2065	MT2064.1	-	-

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<i>Mycobacterium tuberculosis</i> CDC1551	-/COG2442-PIN	MT2075	MT2074	-	-
<i>Mycobacterium tuberculosis</i> CDC1551	relBE/Xre-RelE	MT2078	MT2077	-	-
<i>Mycobacterium tuberculosis</i> CDC1551	-/ArsR-COG3832	MT2095	MT2094	-	-
<i>Mycobacterium tuberculosis</i> CDC1551	mazEF, ccd or relBE/RHH-MazF	MT2123	MT2122	-	-
<i>Mycobacterium tuberculosis</i> CDC1551	vapBC/RHH-PIN	MT2163	MT2164	-	-
<i>Mycobacterium tuberculosis</i> CDC1551	parDE/-	MT2200	MT2201	-	-
<i>Mycobacterium tuberculosis</i> CDC1551	vapBC/RHH-PIN	MT2569	MT2568	-	-
<i>Mycobacterium tuberculosis</i> CDC1551	vapBC/RHH-PIN	MT2602	MT2601.2	-	-
<i>Mycobacterium tuberculosis</i> CDC1551	vapBC/RHH-PIN	MT2605	MT2606	-	-
<i>Mycobacterium tuberculosis</i> CDC1551	vapBC/RHH-PIN	MT2622	MT2621	-	-
<i>Mycobacterium tuberculosis</i> CDC1551	vapBC/RHH-PIN	MT2624	MT2623	-	-
<i>Mycobacterium tuberculosis</i> CDC1551	vapBC/RHH-PIN	MT2677	MT2676	-	-
<i>Mycobacterium tuberculosis</i> CDC1551	mazEF/XF1863-MazF	MT2722	MT2721	-	-
<i>Mycobacterium tuberculosis</i> CDC1551	vapBC/RHH-PIN	MT2827	MT2828	-	-
<i>Mycobacterium tuberculosis</i> CDC1551	vapBC/RHH-PIN	MT2829	MT2830	-	-
<i>Mycobacterium tuberculosis</i> CDC1551	vapBC/-	MT2932	MT2931	-	-
<i>Mycobacterium tuberculosis</i> CDC1551	vapBC/PHD-PIN	MT3271	MT3272	-	-
<i>Mycobacterium tuberculosis</i> CDC1551	relBE/Xre-RelE	MT3274	MT3275	-	-
<i>Mycobacterium tuberculosis</i> CDC1551	-/Xre-COG5654	MT3277	MT3276	-	-
<i>Mycobacterium tuberculosis</i> CDC1551	vapBC/RHH-PIN	MT3421	MT3422	-	-
<i>Mycobacterium tuberculosis</i> CDC1551	relBE/PHD-RelE	MT3466	MT3465	-	-
<i>Mycobacterium tuberculosis</i> CDC1551	vapBC/PHD-PIN	MT3492	MT3493	-	-

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<i>Mycobacterium tuberculosis</i> CDC1551	vapBC/PHD-PIN	MT3516	MT3515	-	-
<i>Mycobacterium tuberculosis</i> CDC1551	vapBC/RHH-PIN	MT3799	MT3800	-	-
<i>Mycobacterium tuberculosis</i> CDC1551	-/MerR-PIN	MT3856	MT3857	-	-
<i>Mycobacterium tuberculosis</i> F11	vapBC/RHH-PIN	TBFG_10243	TBFG_10242	-	-
<i>Mycobacterium tuberculosis</i> F11	vapBC/RHH-PIN	TBFG_10281	TBFG_10282	-	-
<i>Mycobacterium tuberculosis</i> F11	mazEF, ccd or relBE/RHH-MazF	TBFG_10306	TBFG_10305	-	-
<i>Mycobacterium tuberculosis</i> F11	vapBC/RHH-PIN	TBFG_10593	TBFG_10592	-	-
<i>Mycobacterium tuberculosis</i> F11	vapBC/PHD-PIN	TBFG_10607	TBFG_10608	-	-
<i>Mycobacterium tuberculosis</i> F11	vapBC/AbrB-PIN	TBFG_10610	TBFG_10611	-	-
<i>Mycobacterium tuberculosis</i> F11	vapBC/RHH-PIN	TBFG_10620	TBFG_10619	-	-
<i>Mycobacterium tuberculosis</i> F11	vapBC/RHH-PIN	TBFG_10635	TBFG_10634	-	-
<i>Mycobacterium tuberculosis</i> F11	vapBC/PHD-PIN	TBFG_10638	TBFG_10637	-	-
<i>Mycobacterium tuberculosis</i> F11	vapBC/RHH-PIN	TBFG_10669	TBFG_10670	-	-
<i>Mycobacterium tuberculosis</i> F11	mazEF, ccd or relBE/RHH-MazF	TBFG_10672	TBFG_10673	-	-
<i>Mycobacterium tuberculosis</i> F11	vapBC/RHH-PIN	TBFG_10674	TBFG_10675	-	-
<i>Mycobacterium tuberculosis</i> F11	vapBC/RHH-PIN	TBFG_10763	TBFG_10762	-	-
<i>Mycobacterium tuberculosis</i> F11	-/RHH-GNAT	TBFG_10937	TBFG_10936	-	-
<i>Mycobacterium tuberculosis</i> F11	vapBC/RHH-PIN	TBFG_11136	TBFG_11135	-	-
<i>Mycobacterium tuberculosis</i> F11	vapBC/RHH-PIN	TBFG_11267	TBFG_11266	-	-
<i>Mycobacterium tuberculosis</i> F11	relBE or parDE/PHD-RelE	TBFG_11272	TBFG_11273	-	-
<i>Mycobacterium tuberculosis</i> F11	vapBC/RHH-PIN	TBFG_11426	TBFG_11427	-	-
<i>Mycobacterium tuberculosis</i> F11	vapBC/RHH-PIN	TBFG_11593	TBFG_11592	-	-
<i>Mycobacterium tuberculosis</i> F11	vapBC/RHH-PIN	TBFG_11759	TBFG_11758	-	-
<i>Mycobacterium tuberculosis</i> F11	vapBC/RHH-PIN	TBFG_11982	TBFG_11981	-	-
<i>Mycobacterium tuberculosis</i> F11	relBE/Xre-RelE	TBFG_11983	TBFG_11984	-	-
<i>Mycobacterium tuberculosis</i> F11	RelBE or parDE/RHH-RelE	TBFG_11987	TBFG_11988	-	-
<i>Mycobacterium tuberculosis</i> F11	vapBC/PHD-PIN	TBFG_11990	TBFG_11991	-	-
<i>Mycobacterium tuberculosis</i> F11	-/COG5642-COG5654	TBFG_12020	TBFG_12021	-	-
<i>Mycobacterium tuberculosis</i> F11	vapBC/RHH-PIN	TBFG_12042	TBFG_12041	-	-
<i>Mycobacterium tuberculosis</i> F11	-/COG2442-PIN	TBFG_12054	TBFG_12053	-	-
<i>Mycobacterium tuberculosis</i> F11	relBE/Xre-RelE	TBFG_12057	TBFG_12056	-	-

<i>Mycobacterium tuberculosis</i> F11	-/ArsR-COG3832	TBFG_12072	TBFG_12071	-	-
<i>Mycobacterium tuberculosis</i> F11	vapBC/RHH-PIN	TBFG_12137	TBFG_12138	-	-
<i>Mycobacterium tuberculosis</i> F11	vapBC/RHH-PIN	TBFG_12566	TBFG_12565	-	-
<i>Mycobacterium tuberculosis</i> F11	vapBC/RHH-PIN	TBFG_12568	TBFG_12567	-	-
<i>Mycobacterium tuberculosis</i> F11	vapBC/RHH-PIN	TBFG_12570	TBFG_12571	-	-
<i>Mycobacterium tuberculosis</i> F11	vapBC/RHH-PIN	TBFG_12770	TBFG_12771	-	-
<i>Mycobacterium tuberculosis</i> F11	vapBC/RHH-PIN	TBFG_12772	TBFG_12773	-	-
<i>Mycobacterium tuberculosis</i> F11	mazEF, ccd or relBE/RHH-MazF	TBFG_12814	TBFG_12815	-	-
<i>Mycobacterium tuberculosis</i> F11	-/RHH-GNAT	TBFG_12818	TBFG_12817	-	-
<i>Mycobacterium tuberculosis</i> F11	vapBC/PHD-PIN	TBFG_12844	TBFG_12845	-	-
<i>Mycobacterium tuberculosis</i> F11	relBE or parDE/PHD-RelE	TBFG_12882	TBFG_12881	-	-
<i>Mycobacterium tuberculosis</i> F11	vapBC/PHD-PIN	TBFG_13202	TBFG_13203	-	-
<i>Mycobacterium tuberculosis</i> F11	relBE/Xre-RelE	TBFG_13204	TBFG_13205	-	-
<i>Mycobacterium tuberculosis</i> F11	-/Xre-COG5654	TBFG_13209	TBFG_13208	-	-
<i>Mycobacterium tuberculosis</i> F11	vapBC/RHH-PIN	TBFG_13351	TBFG_13352	-	-
<i>Mycobacterium tuberculosis</i> F11	relBE or parDE/PHD-RelE	TBFG_13394	TBFG_13393	-	-
<i>Mycobacterium tuberculosis</i> F11	vapBC/PHD-PIN	TBFG_13418	TBFG_13419	-	-
<i>Mycobacterium tuberculosis</i> F11	-/MerR-PIN	TBFG_13781	TBFG_13782	-	-
<i>Mycobacterium tuberculosis</i> H37Ra	vapBC/RHH-PIN	MRA_0249	MRA_0248	-	-
<i>Mycobacterium tuberculosis</i> H37Ra	vapBC/RHH-PIN	MRA_0285	MRA_0286	-	-
<i>Mycobacterium tuberculosis</i> H37Ra	mazEF, ccd or relBE/RHH-MazF	MRA_0308	MRA_0307	-	-
<i>Mycobacterium tuberculosis</i> H37Ra	vapBC/RHH-PIN	MRA_0310	MRA_0309	-	-
<i>Mycobacterium tuberculosis</i> H37Ra	vapBC/RHH-PIN	MRA_0556	MRA_0557	-	-
<i>Mycobacterium tuberculosis</i> H37Ra	vapBC/PHD-PIN	MRA_0603	MRA_0604	-	-
<i>Mycobacterium tuberculosis</i> H37Ra	vapBC/AbrB-PIN	MRA_0606	MRA_0607	-	-
<i>Mycobacterium tuberculosis</i> H37Ra	vapBC/RHH-PIN	MRA_0616	MRA_0615	-	-
<i>Mycobacterium tuberculosis</i> H37Ra	vapBC/RHH-PIN	MRA_0633	MRA_0632	-	-
<i>Mycobacterium tuberculosis</i> H37Ra	vapBC/PHD-PIN	MRA_0636	MRA_0635	-	-
<i>Mycobacterium tuberculosis</i> H37Ra	vapBC/RHH-PIN	MRA_0667	MRA_0667A	-	-
<i>Mycobacterium tuberculosis</i> H37Ra	mazEF, ccd or relBE/RHH-MazF	MRA_0669	MRA_0670	-	-
<i>Mycobacterium tuberculosis</i> H37Ra	vapBC/RHH-PIN	MRA_0671	MRA_0672	-	-
<i>Mycobacterium tuberculosis</i> H37Ra	vapBC/RHH-PIN	MRA_0757	MRA_0756	-	-
<i>Mycobacterium tuberculosis</i> H37Ra	-/RHH-GNAT	MRA_0927	MRA_0926	-	-

<i>Mycobacterium tuberculosis</i> H37Ra	vapBC/RHH-PIN	MRA_1124	MRA_1123A	-	-
<i>Mycobacterium tuberculosis</i> H37Ra	vapBC/RHH-PIN	MRA_1251	MRA_1250	-	-
<i>Mycobacterium tuberculosis</i> H37Ra	relBE or parDE/PHD-RelE	MRA_1255	MRA_1255A	-	-
<i>Mycobacterium tuberculosis</i> H37Ra	vapBC/RHH-PIN	MRA_1406	MRA_1407	-	-
<i>Mycobacterium tuberculosis</i> H37Ra	vapBC/RHH-PIN	MRA_1573	MRA_1572	-	-
<i>Mycobacterium tuberculosis</i> H37Ra	vapBC/RHH-PIN	MRA_1730	MRA_1731	-	-
<i>Mycobacterium tuberculosis</i> H37Ra	vapBC/RHH-PIN	MRA_1752	MRA_1751	-	-
<i>Mycobacterium tuberculosis</i> H37Ra	vapBC/RHH-PIN	MRA_1849	MRA_1850	-	-
<i>Mycobacterium tuberculosis</i> H37Ra	vapBC/RHH-PIN	MRA_1963	MRA_1962	-	-
<i>Mycobacterium tuberculosis</i> H37Ra	relBE/Xre-RelE	MRA_1964	MRA_1965	-	-
<i>Mycobacterium tuberculosis</i> H37Ra	RelBE or parDE/RHH-RelE	MRA_1968	MRA_1969	-	-
<i>Mycobacterium tuberculosis</i> H37Ra	vapBC/PHD-PIN	MRA_1971	MRA_1972	-	-
<i>Mycobacterium tuberculosis</i> H37Ra	vapBC/RHH-PIN	MRA_1993	MRA_1994	-	-
<i>Mycobacterium tuberculosis</i> H37Ra	-/COG5642-COG5654	MRA_2003	MRA_2004	-	-
<i>Mycobacterium tuberculosis</i> H37Ra	mazEF, ccd or relBE/RHH-MazF	MRA_2006	MRA_2007	-	-
<i>Mycobacterium tuberculosis</i> H37Ra	vapBC/RHH-PIN	MRA_2026	MRA_2025	-	-
<i>Mycobacterium tuberculosis</i> H37Ra	-/COG2442-PIN	MRA_2035	MRA_2034	-	-
<i>Mycobacterium tuberculosis</i> H37Ra	relBE/Xre-RelE	MRA_2038	MRA_2037	-	-
<i>Mycobacterium tuberculosis</i> H37Ra	-/ArsR-COG3832	MRA_2050	MRA_2049	-	-
<i>Mycobacterium tuberculosis</i> H37Ra	mazEF, ccd or relBE/RHH-MazF	MRA_2077	MRA_2076	-	-
<i>Mycobacterium tuberculosis</i> H37Ra	vapBC/RHH-PIN	MRA_2117	MRA_2118	-	-
<i>Mycobacterium tuberculosis</i> H37Ra	vapBC/RHH-PIN	MRA_2520	MRA_2519	-	-
<i>Mycobacterium tuberculosis</i> H37Ra	vapBC/RHH-PIN	MRA_2554	MRA_2553	-	-
<i>Mycobacterium tuberculosis</i> H37Ra	vapBC/RHH-PIN	MRA_2557	MRA_2558	-	-
<i>Mycobacterium tuberculosis</i> H37Ra	vapBC/RHH-PIN	MRA_2574	MRA_2573	-	-
<i>Mycobacterium tuberculosis</i> H37Ra	vapBC/RHH-PIN	MRA_2576	MRA_2575	-	-
<i>Mycobacterium tuberculosis</i> H37Ra	vapBC/RHH-PIN	MRA_2578	MRA_2579	-	-
<i>Mycobacterium tuberculosis</i> H37Ra	vapBC/AbrB-PIN	MRA_2624	MRA_2623A	-	-
<i>Mycobacterium tuberculosis</i> H37Ra	vapBC/RHH-PIN	MRA_2630	MRA_2629A	-	-
<i>Mycobacterium tuberculosis</i> H37Ra	vapBC/RHH-PIN	MRA_2782	MRA_2783	-	-
<i>Mycobacterium tuberculosis</i> H37Ra	vapBC/RHH-PIN	MRA_2784	MRA_2785	-	-
<i>Mycobacterium tuberculosis</i> H37Ra	relBE or parDE/PHD-RelE	MRA_2891	MRA_2890	-	-
<i>Mycobacterium tuberculosis</i> H37Ra	vapBC/RHH-PIN	MRA_2896	MRA_2895A	-	-

<i>Mycobacterium tuberculosis</i> H37Ra	vapBC/PHD-PIN	MRA_3214	MRA_3215	-	-
<i>Mycobacterium tuberculosis</i> H37Ra	relBE/Xre-RelE	MRA_3216	MRA_3217	-	-
<i>Mycobacterium tuberculosis</i> H37Ra	-/Xre-COG5654	MRA_3221	MRA_3220	-	-
<i>Mycobacterium tuberculosis</i> H37Ra	vapBC/RHH-PIN	MRA_3362	MRA_3363	-	-
<i>Mycobacterium tuberculosis</i> H37Ra	relBE or parDE/PHD-RelE	MRA_3398	MRA_3397	-	-
<i>Mycobacterium tuberculosis</i> H37Ra	vapBC/PHD-PIN	MRA_3424	MRA_3425	-	-
<i>Mycobacterium tuberculosis</i> H37Ra	vapBC/PHD-PIN	MRA_3448	MRA_3447	-	-
<i>Mycobacterium tuberculosis</i> H37Ra	vapBC/RHH-PIN	MRA_3732	MRA_3733	-	-
<i>Mycobacterium tuberculosis</i> H37Ra	-/MerR-PIN	MRA_3787	MRA_3788	-	-
<i>Mycobacterium tuberculosis</i> H37Rv	-/-	Rv0059	Rv0060	-	-
<i>Mycobacterium tuberculosis</i> H37Rv	vapBC/RHH-PIN	Rv0065	Rv0064A	-	-
<i>Mycobacterium tuberculosis</i> H37Rv	vapBC/RHH-PIN	Rv0240	Rv0239	-	-
<i>Mycobacterium tuberculosis</i> H37Rv	mazEF, ccd or relBE/RHH-MazF	Rv0299	Rv0298	-	o
<i>Mycobacterium tuberculosis</i> H37Rv	vapBC/RHH-PIN	Rv0301	Rv0300	-	o
<i>Mycobacterium tuberculosis</i> H37Rv	-/RHH-PIN(toxin)	Rv0456a	Rv0456B	-	-
<i>Mycobacterium tuberculosis</i> H37Rv	vapBC/RHH-PIN	Rv0549c	Rv0550c	-	o
<i>Mycobacterium tuberculosis</i> H37Rv	vapBC/RHH-PIN	Rv0582	Rv0581	-	o
<i>Mycobacterium tuberculosis</i> H37Rv	vapBC/PHD-PIN	Rv0595c	Rv0596c	-	-
<i>Mycobacterium tuberculosis</i> H37Rv	vapBC/AbrB-PIN	Rv0598c	Rv0599c	-	-
<i>Mycobacterium tuberculosis</i> H37Rv	vapBC/RHH-PIN	Rv0609	Rv0608	-	o
<i>Mycobacterium tuberculosis</i> H37Rv	vapBC/-	Rv0617	Rv0616c	-	-
<i>Mycobacterium tuberculosis</i> H37Rv	vapBC/RHH-PIN	Rv0624	Rv0623	-	o
<i>Mycobacterium tuberculosis</i> H37Rv	vapBC/PHD-PIN	Rv0627	Rv0626	-	-
<i>Mycobacterium tuberculosis</i> H37Rv	vapBC/RHH-PIN	Rv0656c	Rv0657c	-	-
<i>Mycobacterium tuberculosis</i> H37Rv	mazEF/RHH-MazF	Rv0659c	Rv0660c	-	-
<i>Mycobacterium tuberculosis</i> H37Rv	vapBC/RHH-PIN	Rv0661c	Rv0662c	-	-
<i>Mycobacterium tuberculosis</i> H37Rv	vapBC/-	Rv0665	Rv0664	-	-
<i>Mycobacterium tuberculosis</i> H37Rv	vapBC/RHH-PIN	Rv0749	Rv0748	-	o
<i>Mycobacterium tuberculosis</i> H37Rv	-/-	Rv0836c	Rv0837c	-	-
<i>Mycobacterium tuberculosis</i> H37Rv	unclassified/-	Rv0910	Rv0909	-	o
<i>Mycobacterium tuberculosis</i> H37Rv	-/RHH-GNAT	Rv0919	Rv0918	-	-
<i>Mycobacterium tuberculosis</i> H37Rv	-/-	Rv0960	Rv0959A	-	-
<i>Mycobacterium tuberculosis</i> H37Rv	mazEF/-	Rv1102c	Rv1103c	-	o

<i>Mycobacterium tuberculosis</i> H37Rv	vapBC/RHH-PIN	Rv1114	Rv1113	-	o
<i>Mycobacterium tuberculosis</i> H37Rv	vapBC/RHH-PIN	Rv1242	Rv1241	-	o
<i>Mycobacterium tuberculosis</i> H37Rv	relBE/PHD-RelE	Rv1246c	Rv1247c	-	o
<i>Mycobacterium tuberculosis</i> H37Rv	vapBC/RHH-PIN	Rv1397c	Rv1398c	-	-
<i>Mycobacterium tuberculosis</i> H37Rv	mazEF/-	Rv1495	Rv1494	-	o
<i>Mycobacterium tuberculosis</i> H37Rv	unclassified/-	Rv1546	Rv1545	-	-
<i>Mycobacterium tuberculosis</i> H37Rv	vapBC/RHH-PIN	Rv1561	Rv1560	-	o
<i>Mycobacterium tuberculosis</i> H37Rv	vapBC/RHH-PIN	Rv1720c	Rv1721c	-	-
<i>Mycobacterium tuberculosis</i> H37Rv	vapBC/RHH-PIN	Rv1741	Rv1740	-	-
<i>Mycobacterium tuberculosis</i> H37Rv	vapBC/RHH-PIN	Rv1838c	Rv1839c	-	-
<i>Mycobacterium tuberculosis</i> H37Rv	mazEF/-	Rv1942c	Rv1943c	-	o
<i>Mycobacterium tuberculosis</i> H37Rv	vapBC/RHH-PIN	Rv1953	Rv1952	-	-
<i>Mycobacterium tuberculosis</i> H37Rv	higBA/Xre-RelE	Rv1955	Rv1956	-	o
<i>Mycobacterium tuberculosis</i> H37Rv	parDE/RHH-RelE	Rv1959c	Rv1960c	-	-
<i>Mycobacterium tuberculosis</i> H37Rv	-/RHH-RelE(toxin)	Rv1962c	Rv1963c	-	o
<i>Mycobacterium tuberculosis</i> H37Rv	vapBC/RHH-PIN	Rv1982c	Rv1982a	-	-
<i>Mycobacterium tuberculosis</i> H37Rv	-/COG5642-COG5654	Rv1989c	Rv1990c	-	-
<i>Mycobacterium tuberculosis</i> H37Rv	mazEF, ccd or relBE/RHH-MazF	Rv1991c	Rv1991a	-	o
<i>Mycobacterium tuberculosis</i> H37Rv	vapBC/RHH-PIN	Rv2010	Rv2009	-	o
<i>Mycobacterium tuberculosis</i> H37Rv	-/COG2442-PIN	Rv2019	Rv2018	-	-
<i>Mycobacterium tuberculosis</i> H37Rv	relBE/Xre-RelE	Rv2022c	Rv2021c	-	-
<i>Mycobacterium tuberculosis</i> H37Rv	-/ArsR-COG3832	Rv2035	Rv2034	-	-
<i>Mycobacterium tuberculosis</i> H37Rv	mazEF, ccd or relBE/RHH-MazF	Rv2063A	Rv2063	-	o
<i>Mycobacterium tuberculosis</i> H37Rv	vapBC/RHH-PIN	Rv2103c	Rv2104c	-	-
<i>Mycobacterium tuberculosis</i> H37Rv	-/-	Rv2142c	Rv2142A	-	o
<i>Mycobacterium tuberculosis</i> H37Rv	vapBC/PHD-PIN	Rv2231A	Rv2231B	-	-
<i>Mycobacterium tuberculosis</i> H37Rv	-/PHD-PIN(toxin)	Rv2274c	Rv2274A	-	-
<i>Mycobacterium tuberculosis</i> H37Rv	vapBC/RHH-PIN	Rv2494	Rv2493	-	-
<i>Mycobacterium tuberculosis</i> H37Rv	vapBC/RHH-PIN	Rv2527	Rv2526	-	-
<i>Mycobacterium tuberculosis</i> H37Rv	vapBC/RHH-PIN	Rv2530c	Rv2530A	-	o
<i>Mycobacterium tuberculosis</i> H37Rv	vapBC/RHH-PIN	Rv2546	Rv2545	-	-
<i>Mycobacterium tuberculosis</i> H37Rv	vapBC/RHH-PIN	Rv2548	Rv2547	-	o
<i>Mycobacterium tuberculosis</i> H37Rv	vapBC/RHH-PIN	Rv2549c	Rv2550c	-	-

<i>Mycobacterium tuberculosis</i> H37Rv	vapBC/AbrB-PIN	Rv2596	Rv2595	-	-
<i>Mycobacterium tuberculosis</i> H37Rv	vapBC/RHH-PIN	Rv2602	Rv2601A	-	o
<i>Mycobacterium tuberculosis</i> H37Rv	unclassified/-	Rv2653c	Rv2654c	-	o
<i>Mycobacterium tuberculosis</i> H37Rv	-/RHH-PIN(antitoxin)	Rv2697c	Rv3697A	-	-
<i>Mycobacterium tuberculosis</i> H37Rv	vapBC/RHH-PIN	Rv2757c	Rv2758c	-	o
<i>Mycobacterium tuberculosis</i> H37Rv	vapBC/RHH-PIN	Rv2759c	Rv2760c	-	-
<i>Mycobacterium tuberculosis</i> H37Rv	mazEF, ccd or relBE/RHH-MazF	Rv2801c	Rv2801A	-	o
<i>Mycobacterium tuberculosis</i> H37Rv	-/-	Rv2826c	Rv2827c	-	-
<i>Mycobacterium tuberculosis</i> H37Rv	vapBC/PHD-PIN	Rv2829c	Rv2830c	-	o
<i>Mycobacterium tuberculosis</i> H37Rv	-/-	Rv2863	Rv2862A	-	-
<i>Mycobacterium tuberculosis</i> H37Rv	relBE/PHD-RelE	Rv2866	Rv2865	-	o
<i>Mycobacterium tuberculosis</i> H37Rv	vapBC/RHH-PIN	Rv2872	Rv2871	-	o
<i>Mycobacterium tuberculosis</i> H37Rv	vapBC/PHD-PIN	Rv3180c	Rv3181c	-	-
<i>Mycobacterium tuberculosis</i> H37Rv	relBE/Xre-RelE	Rv3182	Rv3183	-	-
<i>Mycobacterium tuberculosis</i> H37Rv	-/Xre-COG5654	Rv3189	Rv3188	-	-
<i>Mycobacterium tuberculosis</i> H37Rv	vapBC/RHH-PIN	Rv3320c	Rv3321c	-	-
<i>Mycobacterium tuberculosis</i> H37Rv	relBE/PHD-RelE	Rv3358	Rv3357	-	o
<i>Mycobacterium tuberculosis</i> H37Rv	vapBC/PHD-PIN	Rv3384c	Rv3385c	-	o
<i>Mycobacterium tuberculosis</i> H37Rv	vapBC/PHD-PIN	Rv3408	Rv3407	-	o
<i>Mycobacterium tuberculosis</i> H37Rv	-/MerR-PIN	Rv3749c	Rv3750c	-	-
<i>Bacillus anthracis</i> str. Ames	mazEF/RHH-MazF	BA_0254	BA_0253	-	-
<i>Bacillus anthracis</i> str. Ames	-/Xre-Bro	BA_3827	BA_3828	-	-
<i>Bacillus anthracis</i> str. Ames	-/Xre-COG2856	BA_3830	BA_3829	-	-
<i>Bacillus anthracis</i> str. Ames	-/ArsR-COG3832	BA_4963	BA_4962	-	-
<i>Bacillus anthracis</i> str. Sterne	mazEF/RHH-MazF	BAS0240	BAS0239	-	o
<i>Bacillus anthracis</i> str. Sterne	-/Xre-Bro	BAS3543	BAS3544	-	-
<i>Bacillus anthracis</i> str. Sterne	-/Xre-COG2856	BAS3546	BAS3545	-	-
<i>Bacillus anthracis</i> str. Sterne	-/ArsR-COG3832	BAS4607	BAS4606	-	-
<i>Bacillus cereus</i> ATCC 10987	mazEF/RHH-MazF	BCE_0274	BCE_0273	-	-
<i>Bacillus cereus</i> ATCC 10987	-/Xre-COG2856	BCE_4623	BCE_4622	-	-
<i>Bacillus cereus</i> ATCC 10987	-/ArsR-COG3832	BCE_4853	BCE_4852	-	-
<i>Bacillus cereus</i> ATCC 10987	-/HEPN-MNT	BCE_A0102	BCE_A0103	-	-
<i>Bacillus cereus</i> ATCC 14579	mazEF/RHH-MazF	BC0266	BC0265	-	-

<i>Bacillus cereus</i> ATCC 14579	-/Xre-Bro	BC3702	BC3703	-	-
<i>Bacillus cereus</i> ATCC 14579	-/ArsR-COG3832	BC4709	BC4708	-	-
<i>Bacillus cereus</i> E33L	mazEF/RHH-MazF	BCZK0228	BCZK0227	-	-
<i>Bacillus cereus</i> E33L	-/Xre-Bro	BCZK3457	BCZK3458	-	-
<i>Bacillus cereus</i> E33L	-/Xre-COG2856	BCZK3460	BCZK3459	-	-
<i>Bacillus cereus</i> E33L	-/ArsR-COG3832	BCZK4461	BCZK4460	-	-
<i>Bacillus cereus</i> E33L	-/HEPN-MNT	pE33L466_026 9	pE33L466_027 0	-	-
<i>Bacillus subtilis</i> subsp. <i>subtilis</i> str. 168	bsrG-SR4/-	BSU21546	BSU_misc_RN A_77	-	o
<i>Bacillus subtilis</i> subsp. <i>subtilis</i> str. 168	rtbD-rtbE/-	BSU39300	BSU39290	-	o
<i>Bacillus subtilis</i> subsp. <i>subtilis</i> str. 168	mazEF/RHH-MazF	BSU04660	BSU04650	-	o
<i>Bacillus subtilis</i> subsp. <i>subtilis</i> str. 168	-/Xre-COG2856	BSU04810	BSU04820	-	-
<i>Bacillus subtilis</i> subsp. <i>subtilis</i> str. 168	SpoIIISAB/-	BSU12830	BSU12820	-	o
<i>Bacillus subtilis</i> subsp. <i>subtilis</i> str. 168	-/Xre-GNAT	BSU19060	BSU19050	-	-

## Reference

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