

SUPPLEMENTAL TABLE 2 Comparison of the <i>wbt</i> gene clusters of four different strains within the genus <i>Francisella</i>				
<i>F. tularensis</i> Schu S4	<i>F. philomiragia</i> ATCC 25017	<i>Francisella</i> spp. TX07-7308	<i>F. novicida</i> U112	Annotation
Locus tag (protein)	Locus tag (protein, % identity ¹)	Locus tag (protein, % identity ¹)	Locus tag (protein, % identity ¹)	
FTT_1447c (494 aa)	Fphi_1270 (494 aa, 87%)	F7308_0881 (494 aa, 85%)	FTN_1417 (494 aa, 99%)	ManB: Phosphomannomutase
FTT_1448c (468 aa)	None	None	FTN_1418 (468 aa, 97%)	ManC: Mannose-1- phosphate guanylyltransferase/ mannose-6-phosphate isomerase
None	Fphi_1269 (256 aa)	F7308_0880 (256 aa, 98%)	None	Glycosyl transferase family protein
None	Fphi_1268 (383 aa)	F7308_0879 (383 aa, 96%)	None	Glycosyl transferase, group 1
None	Fphi_1267 (341 aa)	F7308_0878 (341 aa, 94%)	None	Glycosyltransferase-

				like protein
None	Fphi_1266 (249 aa)	F7308_0877 (249 aa, 91%)	None	Glycosyl transferase family protein
None	Fphi_1265 (294 aa)	F7308_0876 (294 aa, 97%)	None	Cell wall biosynthesis glycosyltransferase-like protein
None	None	F7308_0875 (414 aa)	None	ABC transporter-like protein
None	None	F7308_0874 (271 aa)	None	ABC transporter-like protein
None	None	F7308_0873 (587 aa)	None	Hypothetical protein
None	None	F7308_0872 (35 aa)	None	Hypothetical protein
None	Fphi_1264 (373 aa)	F7308_0871 (360 aa, 76%)	None	Cell wall biosynthesis glycosyltransferase-like protein
None	Fphi_1263 (230 aa)	F7308_0870 (234 aa, 72%)	None	Hypothetical protein

None	Fphi_1262 (763 aa)	F7308_0869 (763 aa, 60%)	None	Glycosyl transferase, group 1
None	Fphi_1261 (363 aa)	None	None	Cell wall biosynthesis glycosyltransferase-like protein
None	None	F7308_0868 (749 aa)	None	Glycosyl transferase, group 1
None	None	F7308_0867 (44 aa)	None	Hypothetical protein
None	None	F7308_0866 (153 aa)	None	WxcM-like protein
None	Fphi_1256 (135 aa)	F7308_0865 (135 aa, 68%)	None	Hypothetical protein
None	None	F7308_0864 (126 aa)	None	Hypothetical protein
None	None	F7308_0863 (231 aa)	None	WbqC-like family protein
None	None	F7308_0862 (308 aa)	None	Hypothetical protein
None	None	F7308_0861 (220 aa)	None	Acyltransferase
None	None	F7308_0860 (306 aa)	None	Glycosyl transferase,

				family 2
None	Fphi_1260 (365 aa)	F7308_0859 (372 aa, 77%)	None	DegT/DnrJ/EryC1/Str S aminotransferase
None	Fphi_1259 (311 aa)	None	None	Hypothetical protein
None	Fphi_1258 (304 aa)	None	None	Hypothetical protein
None	Fphi_1257 (226 aa)	None	None	Hypothetical protein
None	Fphi_1256 (135 aa)	F7308_0865 (135 aa, 68%)	None	WxcM/WblP protein
None	None	F7308_0858 (323 aa)	None	Glycosyl transferase, group 2 family protein
None	None	F7308_0857 (40 aa)	None	Hypothetical protein
None	None	F7308_0856 (615 aa)	None	Putative glucosyl transferase II
None	None	F7308_0855 (680 aa)	None	Hypothetical protein
None	None	F7308_0854 (378 aa)	None	TDP-4-oxo-6-deoxy- D-glucose transaminase

None	None	F7308_0853 (568 aa)	None	Hypothetical protein
None	None	F7308_0852 (349 aa)	None	Glycosyl transferase, group 2 family protein
None	None	F7308_0851 (192 aa)	None	Hexapaptide repeat-containing transferase
None	Fphi_1255 (445 aa)	None	None	ABC-type polysaccharide/polyol phosphate transport system ATPase component-like protein
None	Fphi_1254 (265 aa)	None	None	ABC-2 type transporter
<i>ISFtu1/IS630</i> (126 aa) ²	None	None	None	Transposase
FTT_1450c (348 aa)	Fphi_1253 (333 aa, 90%)	F7308_0849 (332 aa, 89%)	FTN_1420c (85 aa) ²	WbtM: dTDP-D-glucose 4,6-dehydratase

None	None	None	<i>ISFtu3/IS1016</i> (233 aa) ²	Transposase
None	Fphi_1252 (301 aa)	F7308_0848 (292 aa, 75%)	None	dTDP-4-dehydrorhamnose reductase
None	Fphi_1251 (190 aa)	F7308_0847 (190 aa, 89%)	None	dTDP-4-dehydrorhamnose 3,5-epimerase
FTT_1451c (294 aa)	Fphi_1250 (296 aa, 64%)	F7308_0846 (296 aa, 62%)	None	WbtL: Glucose-1-phosphate thymidyltransferase
None	Fphi_1249 (379 aa)	F7308_0845 (349 aa, 83%)	None	GDP-4-keto-6-deoxy-D-mannose-3,5-epimerase-4-reductase
None	Fphi_1248 (94 aa)	None	None	Hypothetical protein
None	Fphi_1247 (379 aa)	F7308_0844 (379 aa, 95%)	None	GDP-D-mannose dehydratase

None	Fphi_1246 (457 aa)	F7308_0843 (457 aa, 98%)	None	Mannose-1-phosphate guanylyltransferase
None	None	None	FTN_1420 (415 aa)	WzxE: O antigen flippase
FTT_1452c (286 aa)	None	None	None	WbtK: Glycosyltransferase
FTT_1453c (495 aa)	None	None	None	WzxE: O-antigen flippase
FTT_1454c (241 aa)	None	None	None	WbtJ: Hypothetical protein
FTT_1455c (360 aa)	None	F7308_0850 (358 aa, 69%)	None	WbtI: Sugar transamine/ perosamine synthetase
FTT_1456c (628 aa)	None	None	FTN_1421 (630 aa, 98%)	WbtH: Glutamine amidotransferase
None	None	None	FTN_1422 (370 aa)	WbtN: Glycosyl

				transferase, group 1
FTT_1457c (366 aa)	None	None	FTN_1423 (362 aa, 90%)	WbtG: Glycosyl transferase, group 1
None	None	None	FTN_1424 (430 aa)	Hypothetical protein
FTT_1458c (409 aa)	None	None	None	Membrane protein/O- antigen protein
FTT_1459c (323 aa)	None	None	FTN_1425 (324 aa, 99%)	WbtF: NAD dependent epimerase
FTT_1460c (436 aa)	None	None	FTN_1426 (436 aa, 99%)	WbtE: UDP-glucose/ GDP-mannose dehydrogenase
FTT_1461c (363 aa)	None	None	FTN_1427 (363 aa, 87%)	WbtD: Glycosyl transferase, group 1
None	None	None	FTN_1428 (203 aa)	WbtO:

				Acyltransferase
FTT_1462c (263 aa)	Fphi_1245 (261 aa, 69%)	F7308_0842 (261 aa, 67%)	None	WbtC: UDP-glucose 4-epimerase
FTT_1463c (205 aa)	Fphi_1244 (205 aa, 86%)	F7308_0841 (205 aa, 86%)	None	WbtB: Galactosyl transferase
None	None	None	FTN_1429 (209 aa)	WbtP: Galactosyl transferase
None	None	None	FTN_1430 (371 aa)	WbtQ: Aminotransferase
FTT_1464c (578 aa)	Fphi_1243 (586 aa, 81%)	F7308_0840 (580 aa, 79%)	FTN_1431 (578 aa, 99%)	WbtA: dTDP-glucose 4,6-dehydratase
<i>ISFtu1</i> /IS630 (126 aa) ²	None	None	None	Transposase

¹ Identity percentages to protein in column 1, 2, or 3 when present

² These features are not annotated in the published genomes of strains Schu S4 and U112