Mycobacterial Phage Sotrice96 Cover Sheet

ORF 1: Added this ORF.

ORF 2: Called start to get 4bp overlap with prior ORF but that start is misaligned with all top Blastp matches. The best matches are aa1 target aligning to aa3 query.

ORF 20 and 21: Called a programmed translational frameshift with these two ORFs. Used phage Henry to guide annotation of the fusion gene. Slippery sequence CCCAAA starts at bp 12874 with a -1 frame shift at A located at bp 12877. The Blastp alignment for the fusion protein is poor, aa1 Henry aligns with aa25 query, but the first part of the fusion protein (from ORF 20) has perfect alignments with other phages that were not annotated with a fusion gene.

ORF 57: Added this ORF.

ORF 62: Added this ORF.

ORF 64: Deleted REV ORF 61 that was auto-annotated in this position. Replaced it with a FWD ORF that has greater coding potential from GeneMark heuristic output than the overlapping REV ORF. All Blastp matches for REV ORF 61 were unreliable with e values greater than 10-1.

ORF 65: Large overlap with ORF 64, 68bp, also annotated in other Cluster E phages, Cjw1, Phrux, DrDrey and HufflyPuff with these same genes.

ORF 80: HHPred match to N-terminal phage replisome organizer, probability 98%, E-value=4.5e-05. Did not consider this to be a reportable function.

ORF 103: Listed Function as NKF, but a function ID was listed as phosphomannomutase from Bacillus wakoensis, e=4e-15, Blastp GenBank. Did not consider this to be a reportable function.

ORF 106: region HTH MerR-SF transcriptional regulator domain, found for gp106 Cjw1, e=4e70, Blastp GenBank, and HTH-type transcriptional regulator domain matches found in HHPred, probability 99%, E=5.3e-12, multiple similar hits, but was unsure whether this is a reportable function.

ORF 117: Conserved domain identified, AAT-I superfamily of PLP dependent enzymes, in Blastp, GenBank search covers almost entire gene length. Match is to gp 116 Kostya but was not reported as the function for Kostya. Uncertain why this should not be a reportable function.

ORF 121: Added this ORF.

ORF 123: Added this ORF to capture coding potential from GeneMark heuristic output. Deleted auto-annotated ORF 117 REV that had no Blastp match and overlapped ORF 123.

ORF 124: Added this ORF to capture coding potential from GeneMark heuristic output. Deleted auto-annotated ORF 118 REV that had no Blastp match and overlapped ORF 124.

ORF 128: Added this ORF.

ORF 140: Added this ORF.

ORF 151: Added this ORF.