**Query about Function assignment for MrMiyagi gene 97**

Need help deciding on the function of MrMiyagi gene 97 (gene 100 in phamerator). It is an Orpham.

BLASTp in NCBI & phagesDb hits holliday junction resolvase with phage Fowlmouth, q59: s7, coverage 52%, pecent identity 96.97%, e-value 1e-25 (<https://blast.ncbi.nlm.nih.gov/Blast.cgi>).

However, HHPred data hits at DNA Helicase, PDBe, Thermus thermophilus, d1ixsa\_, 28.92%, 92.41% as well as RNA POLYMERASE SIGMA FACTOR CNRH; TRANSCRIPTION, ECF-TYPE SIGMA and on RuvA\_C ; RuvA, C-terminal domain. The hit at Holliday junction DNA helicase ruvA/RuvB(E.C.3.6.1.3) has a probability of 78.61%. I am therefore conflicted on what function to settle for: holliday junction resolvase, DNA Helicase or RNA polymerase sigma factor?

<https://toolkit.tuebingen.mpg.de/jobs/MrMiyagi_gp97>



<https://www.rcsb.org/structure/4CXF>



This is the HHPRED link to the Sigma factor reference sequence

<https://toolkit.tuebingen.mpg.de/jobs/Nurujay_Gp52>