



0.1

Additional file 3. Concatenated phylogeny of four ORFs (1524 aa) from environmental fosmid FLAS10H9 (IQPNNI, WAG, estimated a parameter with eight rate categories plus invariable sites, bootstrap values also calculated with IQPNNI). The four ORFs concatenated here are Pyruvate kinase (Pyk), Sugar-specific transcriptional regulator (TrmB), Conserved hypothetical protein (CHP) and orotate phosphoribosyltransferase (pyrE). Accession numbers for pyrE are YP_657432 (*Haloquadratum walsbyi*), CAD37329 (*Haloferax volcanii*), (YP_135607) *Haloarcula marismortui*, NP_279512 (*Halobacterium sp. NRC-1*).