



Clade T3 phylogenetic tree construction

16S portions (~600 bp fragments) of 41 T3 sequences obtained from PCR screenings of *Niphargus* individuals and Frasassi microbial mat samples were aligned with all T3 sequences contained in *Niphargus* 16S clone libraries using the MAFFT version 6 multiple sequence alignment tool [24] implemented with the Q-INS-I strategy for consideration of RNA secondary structure [25]. The alignment was manually refined, and a 50% consensus filter was applied in MOTHUR [26], resulting in 579 nucleotide positions used for phylogenetic analysis. jModelTest version 0.1.1 [27] was used to determine the best-suited nucleotide model among 88 possible models following the Bayesian Information Criterion. The selected model (TIM3+I) was used to build a Maximum Likelihood (ML) phylogenetic tree (1000 bootstrap replicates) using PhyML 3.0 [28]. The ML tree was rooted using a *Thiothrix eikelboomii* strain sequence downloaded from the GenBank database (accession number NR_024758). In addition, Neighbor-Joining (NJ) bootstrap values for all nodes were calculated based on the same alignment using the BioNJ algorithm (Kimura 2-parameter model; 1000 bootstrap replicates) implemented in SeaView version 4 [30].