



**Supplementary Figure 1:** Phyletic analysis of nine NUDIX Domain proteins from *L. major*. The amino acid sequences of different NUDIX domain proteins were aligned and a molecular evolutionary tree was constructed using 'Clustal Omega' and 'Clustal W2 Phylogeny' (<http://www.ebi.ac.uk/services>), and MEGA 6.06 (Tamura K, et al, 2013, MEGA6, *Mol Biol Evol*, 30:2725-2729). The phyletic tree was derived by sequences sourced from *L. major* strain Friedlin homepage (<http://www.genedb.org/Homepage/Lmajor>).