

Species name;code	NCBI Accession	NUDIX Domain Box	Enzyme Activity & Localization
<i>L. major</i> ; LMPER; LmNH	CAJ08548	---KVLTLIS GFVLHGESA-EETVRREVEEESGA RVSK	Mutt/NUDIX family; NADH_pyrophosphatase; Glycosomal
<i>T. brucei</i> ; TbNH2	Q57Z14	-ED-KFQFVQ GGVEEGDADIIRAAYREVHEEVGL FPED	Inorganic polyphosphate exopolyphosphatase (polyP-PPX) activity;Glycosomal
<i>C. platini</i> ; CPPER	KKF95078	-FGGHAAFPG GKADTTSESPEIARREAWEEIGL PETN	CoASH diphosphatase-1; peroxisomal
<i>H. sapiens</i> ; HS7PER	NP_001099133	-APGEVCFPG GKRDPDMDDAATALREAQEEVGL RPH-	CoASH diphosphatase NUDT7; peroxisomal
<i>S. cerevisiae</i> ; SCPER	AJS01736	-DFVLYSTIA GFMEPSETI-EEACIREIWEETGI SCKN	Npylp; NADH pyrophosphatase; peroxisomal
<i>F. avenaceum</i> ; FAPER	KIL95307	---YWYSTLA GFLEPGESI-EESVRREVWEEESGV RVGR	NADH pyrophosphatase-I, peroxisomal
<i>M. oryzae</i> ; MOPER	ELQ65661	---YWYSTLA GFLEPGESI-EEATRREVWEEESGV TVGR	NADH pyrophosphatase NUDT12; peroxisomal
<i>D. rerio</i> ; DRPER	NP_001017675	---GMFSCLA GFIEPGECV-EAAVRREVQEEESGV QVSA	NADH pyrophosphatase NUDT12; peroxisomal
<i>H. sapiens</i> ; HS12PER	NP_001287670	---GMFTCLA GFIEPGETI-EDAVRREVVEESGV KVGH	NADH pyrophosphatase NUDT12; peroxisomal
<i>X. laevis</i> ; XL12PER	NP_001088355	---GMFSCLA GFIEPGETI-EDAVRREVVEESGV KVGH	NUDIX hydrolase-12L; NADH pyrophosphatase
<i>A. thaliana</i> ; AT20CHL	NP_197447	YPGMLDHLVA GGLPHGISC-GGNLVKECEEEAGI SRAI	NUDIX hydrolase-20; chloroplast
<i>A. thaliana</i> ; AT14CHL	OAP00608	-GKIVLELPA GMLDDDKGDFVGTAVREVVEEIGI KLKK	NUDX14; chloroplast
<i>A. thaliana</i> ; AT15MIT	NP_849724	-HSGEVSLPG GKAEEDDKDDGMTATREAAEEIGL DPS-	NUDIX hydrolase-15; mitochondrial
<i>L. major</i> ; LM36	CAJ08981	-HKSEMSFPG GHVDDDETL-RNAAQRETLEEVGL PPSE	NUDIX hydrolase protein
<i>Try. vivax</i> ; TV	CCC48426	-DKRVIQCVQ GGTEHGETP-QQTAAARELMEEIGL PISA	NUDIX hydrolase
<i>C. elegans</i> ; CE	NP_493209	--RGKWYMPA GRVEAGETI-EEAVREVKEETGY SCDV	NUDIX hydrolase-1
<i>A. thaliana</i> ; AT1	NP_177044	--NSTFALPG GHLEFGESF-EECAAREVMEETGL KIEK	NUDIX hydrolase-1
<i>A. thaliana</i> ; AT13	NP_189303	-NRHDLVFPK GGWEDDETIV-LEAASREAMEEAGV KGI-	NUDIX hydrolase homolog-13
<i>Vaccinia virus</i> ; VV	P04311	PHFEELILLG GKLDKKESI-KDCLRRELKEESDE RITV	mRNA-decapping protein D9
<i>African swine fever virus</i> ; ASFV	P32092	--TLLWEIPK GKPKEDSD-LTCAIREFEEETGI TREY	mRNA-decapping protein g5R
<i>E. coli</i> ; EC	ELD86860	---GVHTVLA GFVEVGETL-EQAVAREVLEESGI KVKN	NADH pyrophosphatase
<i>M. tuberculosis</i> ; MTB	CNF29781	---DRRSILA GFVEPGESL-EQAVAREVKEEVGL AVRQ	NADH pyrophosphatase
<i>Tri. spiralis</i> ; TS	KRY29698	-LSYVIEFPA GMRDAGETA-EQTAFRELQEETGF KATR	NUDIX hydrolase-2;ADP-ribose pyrophosphatase
<i>T. brucei</i> ; TbNH4	Q583R7	-DRSTIQCVQ GGAKRGETV-QQTATREVMEEIGV HCDQ	polyP endo- and exopolyphosphatase activity;Cytoplasm,Nucleus

Supplementary Table 2: Partial sequence alignment of *L. major* (Lmjf.31.2950) with related sequences from different phyla encompassing the of NUDIX domain box: Partial amino acid sequence alignment of the NUDIX domain box of *L. major* (Lmjf.31.2950; NCBI Accession: CAJ08548) and its comparison with the NUDIX box domain sequence from different organisms including viruses. The several conserved residues (shown in bold) in this 23 amino acid domain box contains the REUXEE motif that is involved in binding of divalent cations. The enzymes located in peroxisomes are highlighted with pink while green color indicates chloroplast localization and turquoise for mitochondrially located enzymes.