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KD-Validated Anti-Nudix hydrolase 1 Rabbit Monoclonal Antibody

Rabbit monoclonal antibody
Catalog # AGI1388

Product Information

Application	WB, FC, ICC
Primary Accession	P36639
Reactivity	Human
Clonality	Monoclonal
Isotype	Rabbit IgG
Clone Names	23GB4060
Calculated MW	17952
Gene Name	NUDT1
Aliases	NUDT1; Nudix Hydrolase 1; 7,8-Dihydro-8-Oxoguanine Triphosphatase; Nudix Motif 1; 8-Oxo-DGTPase; MTH1; Nudix (Nucleoside Diphosphate Linked Moiety X)-Type Motif 1; Nucleoside Diphosphate-Linked Moiety X-Type Motif 1; Methylated Purine Nucleoside Triphosphate Hydrolase; Oxidized Purine Nucleoside Triphosphate Hydrolase; 8-Oxo-7,8-Dihydrodeoxyguanosine Triphosphatase; Nucleoside Diphosphate-Linked Moiety X Motif 1; 8-Oxo-7,8-Dihydroguanosine Triphosphatase; 2-Hydroxy-DATP Diphosphatase; MutT Human Homolog 1; EC 3.6.1.56; EC 3.6.1.-
Immunogen	A synthesized peptide derived from human MTH1

Additional Information

Gene ID	4521
Other Names	Oxidized purine nucleoside triphosphate hydrolase, 3.6.1.56, 2-hydroxy-dATP diphosphatase, 7, 8-dihydro-8-oxoguanine triphosphatase, 8-oxo-dGTPase, Methylated purine nucleoside triphosphate hydrolase, 3.6.1.-, Nucleoside diphosphate-linked moiety X motif 1, Nudix motif 1, NUDT1, MTH1 {ECO:0000303|PubMed:7713500}

Protein Information

Name	NUDT1
Synonyms	MTH1 {ECO:0000303|PubMed:7713500}
Function	Oxidized purine nucleoside triphosphate hydrolase which is a prominent sanitizer of the oxidized nucleotide pool (PubMed:10608900, PubMed:12857738, PubMed:22556419, PubMed:24695224, PubMed:24695225, PubMed:26238318, PubMed:28679043, PubMed:7713500, PubMed:8226881). Catalyzes the hydrolysis of 2-oxo-dATP (2-hydroxy-dATP) into 2-oxo-dAMP (PubMed:10373420). Also has a significant hydrolase activity

	toward 2- oxo-ATP, 8-oxo-dGTP and 8-oxo-dATP (PubMed:10373420, PubMed:11139615). Through the hydrolysis of oxidized purine nucleoside triphosphates, prevents their incorporation into DNA and the subsequent transversions A:T to C:G and G:C to T:A (PubMed:10373420, PubMed:10608900, PubMed:11756418, PubMed:12857738, PubMed:16607562, PubMed:24695224, PubMed:24695225, PubMed:26999531, PubMed:28035004, PubMed:8226881). Also catalyzes the hydrolysis of methylated purine nucleoside triphosphate preventing their integration into DNA (PubMed:30304478, PubMed:32144205). Through this antimutagenic activity protects cells from oxidative stress (PubMed:10608900, PubMed:12857738, PubMed:24695224, PubMed:24695225, PubMed:30304478, PubMed:32144205, PubMed:7713500, PubMed:8226881).
Cellular Location	[Isoform p18]: Cytoplasm, cytosol. Mitochondrion matrix. Nucleus. Note=Mostly present in cytosol (PubMed:7782328). A minor proportion is mitochondrial (PubMed:7782328) A very small amount of the protein is associated with nuclei (PubMed:7782328).
Tissue Location	Widely expressed with highest expression in thymus, testis, embryo and proliferating blood lymphocytes

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