

MTH1 Antibody

Rabbit mAb

Catalog # AP92227

Product Information

Application	WB, IHC, IF, FC, ICC, IP, IHF
Primary Accession	P36639
Reactivity	Human
Clonality	Monoclonal
Other Names	MTH1; NUDT 1;
Isotype	Rabbit IgG
Host	Rabbit
Calculated MW	17952

Additional Information

Dilution	WB 1:500~1:2000 IHC 1:50~1:200 ICC/IF 1:50~1:200 IP 1:50 FC 1:100
Purification	Affinity-chromatography
Immunogen	A synthesized peptide derived from human MTH1
Description	Antimutagenic. Acts as a sanitizing enzyme for oxidized nucleotide pools, thus suppressing cell dysfunction and death induced by oxidative stress. Hydrolyzes 8-oxo-dGTP, 8-oxo-dATP and 2-OH-dATP, thus preventing misincorporation of oxidized purine nucleoside triphosphates into DNA and subsequently preventing A:T to C:G and G:C to T:A transversions.
Storage Condition and Buffer	Rabbit IgG in phosphate buffered saline , pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol. Store at +4°C short term. Store at -20°C long term. Avoid freeze / thaw cycle.

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](#)).

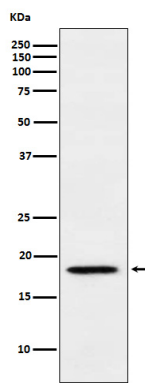
Cellular Location

[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

Images



Western blot analysis of MTH1 expression in Jurkat cell lysate.

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