

# MTH1 Antibody

Rabbit mAb

Catalog # AP92227

## Product Information

<b>Application</b>	WB, IHC, IF, FC, ICC, IP, IHF
<b>Primary Accession</b>	<a href="#">P36639</a>
<b>Reactivity</b>	Human
<b>Clonality</b>	Monoclonal
<b>Other Names</b>	MTH1; NUDT 1;
<b>Isotype</b>	Rabbit IgG
<b>Host</b>	Rabbit
<b>Calculated MW</b>	17952

## Additional Information

<b>Dilution</b>	WB 1:500~1:2000 IHC 1:50~1:200 ICC/IF 1:50~1:200 IP 1:50 FC 1:100
<b>Purification</b>	Affinity-chromatography
<b>Immunogen</b>	A synthesized peptide derived from human MTH1
<b>Description</b>	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.
<b>Storage Condition and Buffer</b>	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

<b>Name</b>	NUDT1
<b>Synonyms</b>	MTH1 {ECO:0000303   PubMed:7713500}
<b>Function</b>	Oxidized purine nucleoside triphosphate hydrolase which is a prominent sanitizer of the oxidized nucleotide pool (PubMed: <a href="#">10608900</a> , PubMed: <a href="#">12857738</a> , PubMed: <a href="#">22556419</a> , PubMed: <a href="#">24695224</a> , PubMed: <a href="#">24695225</a> , PubMed: <a href="#">26238318</a> , PubMed: <a href="#">28679043</a> , PubMed: <a href="#">7713500</a> , PubMed: <a href="#">8226881</a> ). Catalyzes the hydrolysis of 2-oxo-dATP (2-hydroxy-dATP) into 2-oxo-dAMP (PubMed: <a href="#">10373420</a> ). Also has a significant hydrolase activity toward 2- oxo-ATP, 8-oxo-dGTP and 8-oxo-dATP (PubMed: <a href="#">10373420</a> , PubMed: <a href="#">11139615</a> ). 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: <a href="#">10373420</a> , PubMed: <a href="#">10608900</a> , PubMed: <a href="#">11756418</a> , PubMed: <a href="#">12857738</a> , PubMed: <a href="#">16607562</a> , PubMed: <a href="#">24695224</a> , PubMed: <a href="#">24695225</a> ,

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

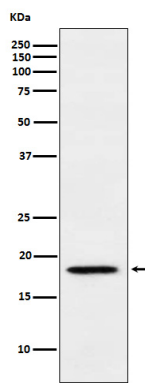
[Isoform p18]: Cytoplasm, cytosol. Mitochondrion matrix. Nucleus.  
Note=Mostly present in cytosol (PubMed:7782328). A minor proportion is mitochondrial (PubMed:7782328) A very small amount of the protein is associated with nuclei (PubMed:7782328).

### Tissue Location

Widely expressed with highest expression in thymus, testis, embryo and proliferating blood lymphocytes

## Images

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Western blot analysis of MTH1 expression in Jurkat cell lysate.

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