

**MTH1 (D6V4O) Rabbit mAb**

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**For Research Use Only. Not for Use in Diagnostic Procedures.**

<b>Applications:</b> W, IP	<b>Reactivity:</b> H R	<b>Sensitivity:</b> Endogenous	<b>MW (kDa):</b> 18	<b>Source/Isotype:</b> Rabbit IgG	<b>UniProt ID:</b> #P36639	<b>Entrez-Gene Id:</b> 4521
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**Product Usage Information****Application**

Western Blotting  
Immunoprecipitation

**Dilution**

1:1000  
1:200

**Storage**

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.

**Specificity/Sensitivity**

MTH1 (D6V4O) Rabbit mAb recognizes endogenous levels of total MTH1 protein. Based on the sequence of the immunogenic peptide, this antibody is expected to recognize all isoforms of MTH1.

**Source / Purification**

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Ala70 of human MTH1 protein.

**Background**

MutT Homolog 1 (MTH1), an oxidized purine nucleoside triphosphatase, hydrolyzes potentially mutagenic oxidized nucleotide triphosphates, preventing their accumulation in nucleotide pools and their incorporation into DNA and RNA (1). In addition to its function in sanitizing the cell's nucleotide pool, MTH1 has been shown to have anti-proliferative effects in RAS-transformed tumors (2). Researchers have shown that, while not essential in normal cells, MTH1 is required for cancer cell survival due to increased oxidative damage, and that inhibition of MTH1 activity suppresses cancer growth (3,4).

**Background References**

1. Nakabeppu, Y. et al. (2006) *DNA Repair (Amst)* 5, 761-72.
2. Giribaldi, M.G. et al. (2015) *Oncotarget* 6, 11519-29.
3. Gad, H. et al. (2014) *Nature* 508, 215-21.
4. Huber, K.V. et al. (2014) *Nature* 508, 222-7.

**Species Reactivity**

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

**Western Blot Buffer**

**IMPORTANT:** For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

**Applications Key**

**W:** Western Blotting **IP:** Immunoprecipitation

**Cross-Reactivity Key**

**H:** Human **R:** Rat

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