

MTH1 Protein, Human (His)

Cat. No.:	HY-P74740
Synonyms:	Oxidized purine nucleoside triphosphate hydrolase; Nudix motif 1; NUDT1; MTH1
Species:	Human
Source:	E. coli
Accession:	P36639-4/NP_002443.3 (M1-V156)
Gene ID:	4521
Molecular Weight:	Approximately 20.2 kDa

PROPERTIES

Biological Activity	The enzyme activity of this recombinant protein is testing in progress, we cannot offer a guarantee yet.
Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 µm filtered solution of 50 mM Tris, 100 mM NaCl, pH 8.0. Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween 80 are added as protectants before lyophilization.
Endotoxin Level	<1 EU/µg, determined by LAL method.
Reconstitution	It is not recommended to reconstitute to a concentration less than 100 µg/mL in ddH ₂ O.
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background	MTH1 Protein functions as an oxidized purine nucleoside triphosphate hydrolase, playing a crucial role in maintaining the integrity of the cellular nucleotide pool. This enzyme catalyzes the hydrolysis of various oxidized purine nucleoside triphosphates, including 2-oxo-dATP, 2-oxo-ATP, 8-oxo-dGTP, and 8-oxo-dATP, preventing their incorporation into DNA and thereby safeguarding against transversions in DNA base pairs. Additionally, MTH1 prevents the integration of methylated purine nucleoside triphosphates into DNA, contributing to its antimutagenic activity and protecting cells from the deleterious effects of oxidative stress. The multifaceted hydrolase activity of MTH1 underscores its significance in preserving genomic stability and mitigating the impact of oxidative damage on cellular processes.
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Caution: Product has not been fully validated for medical applications. For research use only.

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