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NUDT1 Antibody (monoclonal) (M02)

Mouse monoclonal antibody raised against a full length recombinant NUDT1.
Catalog # AT3126a

Product Information

Application	WB, E
Primary Accession	P36639
Other Accession	BC014618
Reactivity	Human
Host	mouse
Clonality	monoclonal
Isotype	IgG2a Kappa
Clone Names	5F11
Calculated MW	17952

Additional Information

Gene ID	4521
Other Names	8-dihydro-8-oxoguanine triphosphatase, 2-hydroxy-dATP diphosphatase, 8-oxo-dGTPase, Nucleoside diphosphate-linked moiety X motif 1, Nudix motif 1, NUDT1, MTH1
Target/Specificity	NUDT1 (AAH14618, 1 a.a. ~ 179 a.a) full-length recombinant protein with GST tag. MW of the GST tag alone is 26 KDa.
Dilution	WB~~1:500~1000 E~~N/A
Format	Clear, colorless solution in phosphate buffered saline, pH 7.2 .
Storage	Store at -20°C or lower. Aliquot to avoid repeated freezing and thawing.
Precautions	NUDT1 Antibody (monoclonal) (M02) is for research use only and not for use in diagnostic or therapeutic procedures.

Background

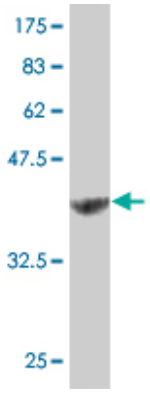
Misincorporation of oxidized nucleoside triphosphates into DNA/RNA during replication and transcription can cause mutations that may result in carcinogenesis or neurodegeneration. The protein encoded by this gene is an enzyme that hydrolyzes oxidized purine nucleoside triphosphates, such as 8-oxo-dGTP, 8-oxo-dATP, 2-hydroxy-dATP, and 2-hydroxy rATP, to monophosphates, thereby preventing misincorporation. The encoded protein is localized mainly in the cytoplasm, with some in the mitochondria, suggesting that it is involved in the sanitization of nucleotide pools both for nuclear and mitochondrial genomes. Several alternatively spliced transcript variants, some of which encode distinct isoforms, have been identified. Additional variants have been observed, but their full-length natures have not been determined. A single-nucleotide polymorphism that results in the production of an additional, longer

isoform (p26) has been described.

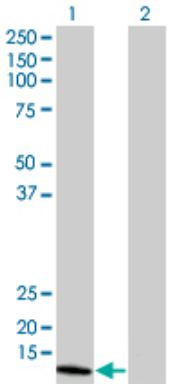
References

A Large-scale genetic association study of esophageal adenocarcinoma risk. Liu CY, et al. Carcinogenesis, 2010 Jul. PMID 20453000.Suppression of mutagenesis by 8-hydroxy-2'-deoxyguanosine 5'-triphosphate (7,8-dihydro-8-oxo-2'-deoxyguanosine 5'-triphosphate) by human MTH1, MTH2, and NUDT5. Hori M, et al. Free Radic Biol Med, 2010 May 1. PMID 20144704.Genetic polymorphisms in hMTH1, hOGG1 and hMYH and risk of chronic benzene poisoning in a Chinese occupational population. Wu F, et al. Toxicol Appl Pharmacol, 2008 Dec 15. PMID 18848840.OGG1, MYH and MTH1 gene variants identified in gastric cancer patients exhibiting both 8-hydroxy-2'-deoxyguanosine accumulation and low inflammatory cell infiltration in their gastric mucosa. Goto M, et al. J Genet, 2008 Aug. PMID 18776649.hMTH1 depletion promotes oxidative-stress-induced apoptosis through a Noxa- and caspase-3/7-mediated signaling pathway. Youn CK, et al. DNA Repair (Amst), 2008 Nov 1. PMID 18708163.

Images

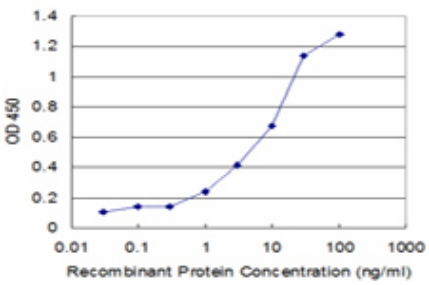


Antibody Reactive Against Recombinant Protein.Western Blot detection against Immunogen (45.43 KDa) .



Western Blot analysis of NUDT1 expression in transfected 293T cell line by NUDT1 monoclonal antibody (M02), clone 5F11.

Lane 1: NUDT1 transfected lysate(18 KDa).
Lane 2: Non-transfected lysate.



Detection limit for recombinant GST tagged NUDT1 is approximately 1ng/ml as a capture antibody.