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NUDT15 Antibody (C-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP11030b

Product Information

Application	IHC-P, FC, WB, E
Primary Accession	Q9NV35
Other Accession	NP_060753.1
Reactivity	Human, Mouse
Predicted	Rat, Bovine, Canine, Rabbit
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB28179
Calculated MW	18609
Antigen Region	89-118

Additional Information

Gene ID	55270
Other Names	Probable 8-oxo-dGTP diphosphatase NUDT15, 8-oxo-dGTPase NUDT15, 8-dihydro-8-oxoguanine-triphosphatase NUDT15, MutT homolog 2, MTH2, Nucleoside diphosphate-linked moiety X motif 15, Nudix motif 15, NUDT15, MTH2
Target/Specificity	This NUDT15 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 89-118 amino acids from the C-terminal region of human NUDT15.
Dilution	IHC-P~~1:100~500 FC~~1:10~50 WB~~1:1000 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	NUDT15 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	NUDT15 (HGNC:23063)

Function

Catalyzes the hydrolysis of nucleoside triphosphates including dGTP, dTTP, dCTP, their oxidized forms like 8-oxo-dGTP and the prodrug thiopurine derivatives 6-thio-dGTP and 6-thio-GTP (PubMed:26238318). Could also catalyze the hydrolysis of some nucleoside diphosphate derivatives (PubMed:22556419, PubMed:26238318). Hydrolyzes oxidized nucleosides triphosphates like 8-oxo-dGTP in vitro, but the specificity and efficiency towards these substrates are low. Therefore, the potential in vivo sanitizing role of this enzyme, that would consist in removing oxidatively damaged forms of nucleosides to prevent their incorporation into DNA, is unclear (PubMed:22556419, PubMed:26238318). Through the hydrolysis of thioguanosine triphosphates may participate in the catabolism of thiopurine drugs (PubMed:25108385, PubMed:26238318). May also have a role in DNA synthesis and cell cycle progression by stabilizing PCNA (PubMed:19419956). Exhibits decapping activity towards dpCoA-capped RNAs in vitro (By similarity). In vitro, it catalyzes the hydrolysis of isoprene pyrophosphates, including (2E)- geranyl diphosphate, isopentenyl diphosphate, (2E,6E)-farnesyl diphosphate and dimethylallyl diphosphate (PubMed:38944687). It may therefore play a role in the control of cellular levels of these metabolites that are essential for multiple cellular processes, including isoprenoids synthesis and protein isoprenylation (Probable).

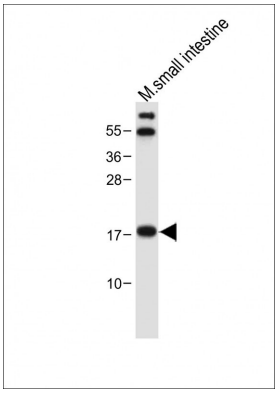
Background

Mediates the hydrolysis of some nucleoside diphosphate derivatives. Can degrade 8-oxo-dGTP in vitro, suggesting that it may remove an oxidatively damaged form of guanine (7,8-dihydro-8-oxoguanine) from DNA and the nucleotide pool, thereby preventing misincorporation of 8-oxo-dGTP into DNA thus preventing A:T to C:G transversions. Its substrate specificity in vivo however remains unclear (By similarity). May have a role in DNA synthesis and cell cycle progression throught the interaction with PCNA.

References

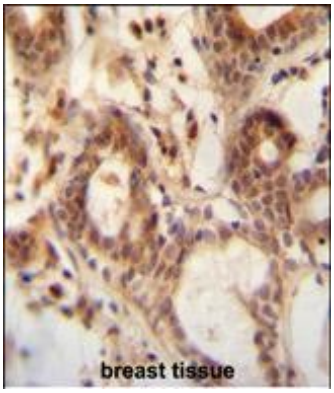
Hori, M., et al. Free Radic. Biol. Med. 48(9):1197-1201(2010) Yu, Y., et al. J. Biol. Chem. 284(29):19310-19320(2009) Dunham, A., et al. Nature 428(6982):522-528(2004) Cai, J.P., et al. Biochem. Biophys. Res. Commun. 305(4):1073-1077(2003)

Images

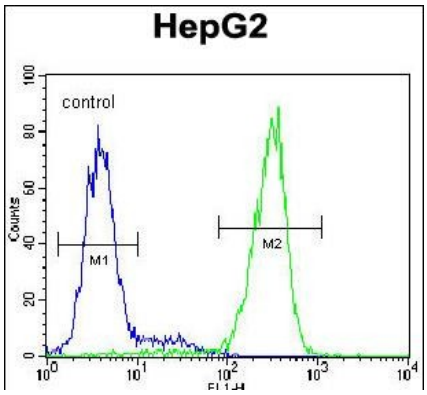


Anti-NUDT15 Antibody (C-term) at 1:500 dilution + Mouse small intestine tissue lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 19 kDa Blocking/Dilution buffer: 5% NFDM/TBST.

NUDT15 antibody (C-term) (Cat. #AP11030b) immunohistochemistry analysis in formalin fixed and paraffin embedded human breast tissue followed by peroxidase conjugation of the secondary antibody and DAB staining. This data demonstrates the use of the NUDT15 antibody (C-term) for immunohistochemistry.



Clinical relevance has not been evaluated.



NUDT15 Antibody (C-term) (Cat. #AP11030b) flow cytometric analysis of HepG2 cells (right histogram) compared to a negative control cell (left histogram).FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.

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