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NUDT5 Recombinant Rabbit mAb

Catalog # AP100044

Product Information

Application	WB, IHC-P, IHC-F, IF
Primary Accession	Q9UKK9
Other Accession	Q9UKK9
Reactivity	Human
Host	Rabbit
Clonality	Recombinant
Calculated MW	24328
Physical State	Liquid
Immunogen	A synthesized peptide derived from human NUDT5
Epitope Specificity	20-55
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	10mM phosphate buffered saline(pH 7.4) with 150mM sodium chloride, 0.05% BSA, 0.02% Proclin300 and 50% glycerol.
SIMILARITY	Belongs to the Nudix hydrolase family. Contains 1 nudix hydrolase domain.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	Enzyme that can either act as an ADP-sugar pyrophosphatase in absence of diphosphate or catalyze the synthesis of ATP in presence of diphosphate.In absence of diphosphate, hydrolyzes with similar activities various modified nucleoside diphosphates such as ADP-ribose, ADP-mannose, ADP-glucose, 8-oxo-GDP and 8-oxo-dGDP.

Additional Information

Gene ID	11164
Other Names	YSA1; YSA1H; YSAH1; hNUDT5; NUDT5_HUMAN; NUDT5; 8-oxo-dGDP phosphatase; Nuclear ATP-synthesis protein NUDIX5; Nucleoside diphosphate-linked moiety X motif 5 (Nudix motif 5 | hNUDT5); 3.6.1.13; NUDIX5; NUDT5_MOUSE; Nucleoside diphosphate-linked moiety X motif 5 (Nudix motif 5); NUDT5_RAT; nudix hydrolase 5; nudix (nucleoside diphosphate linked moiety X)-type motif 5
Dilution	WB=1:1000-2000,IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

Protein Information

Name	NUDT5 (HGNC:8052)
Function	Enzyme that can either act as an ADP-sugar pyrophosphatase in absence of diphosphate or catalyze the synthesis of ATP in presence of diphosphate (PubMed:27257257). In absence of diphosphate, hydrolyzes with similar activities various modified nucleoside diphosphates such as ADP-ribose, ADP-mannose, ADP-glucose, 8-oxo-GDP and 8-oxo-dGDP (PubMed:10567213, PubMed:10722730, PubMed:17052728, PubMed:12717453, PubMed:19699693, PubMed:21389046, PubMed:38635563). Can also hydrolyze other nucleotide sugars with low activity (PubMed:12717453, PubMed:19699693, PubMed:21389046). In presence of diphosphate, mediates the synthesis of ATP in the nucleus by catalyzing the conversion of ADP-ribose to ATP and ribose 5-phosphate. Nuclear ATP synthesis takes place when dephosphorylated at Thr-45 (PubMed:27257257). Nuclear ATP generation is required for extensive chromatin remodeling events that are energy-consuming (PubMed:27257257). In vitro, it has decapping activity on 11-mer RNA capped with uridine diphosphate N- acetylglucosamine (UDP-GlcNAc) by hydrolyzing the pyrophosphate bridge of the sugar cap (PubMed:38716860). Does not play a role in U8 snoRNA decapping (By similarity). Binds U8 snoRNA (By similarity).
Cellular Location	Nucleus.
Tissue Location	Widely expressed. Most abundant in liver.

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