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NUDT5 Antibody

Rabbit mAb
Catalog # AP92686

Product Information

Application	WB, IHC
Primary Accession	Q9UKK9
Reactivity	Rat, Human, Mouse
Clonality	Monoclonal
Other Names	hYSAH1; Nudt5; YSA1; YSA1H;
Isotype	Rabbit IgG
Host	Rabbit
Calculated MW	24328

Additional Information

Dilution	WB 1:500~1:2000 IHC 1:50~1:200
Purification	Affinity-chromatography
Immunogen	A synthesized peptide derived from human NUDT5
Description	Hydrolyzes with similar activities ADP-ribose, ADP-mannose, and ADP-glucose. Can also hydrolyze other nucleotide sugars with low activity.
Storage Condition and Buffer	Rabbit IgG in phosphate buffered saline , pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol. Store at +4°C short term. Store at -20°C long term. Avoid freeze / thaw cycle.

Protein Information

Name NUDT5 (HGNC:8052)

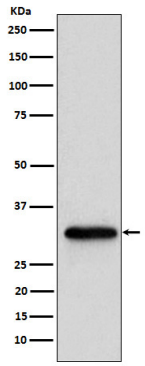
Function Enzyme that can either act as an ADP-sugar pyrophosphatase in absence of diphosphate or catalyze the synthesis of ATP in presence of diphosphate (PubMed:27257257). In absence of diphosphate, hydrolyzes with similar activities various modified nucleoside diphosphates such as ADP-ribose, ADP-mannose, 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.

Images



Western blot analysis of NUDT5 expression in HeLa cell lysate.

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