

Nudt16 antibody - N-terminal region

Rabbit Polyclonal Antibody

Catalog # AI13485

Product Information

Application	WB
Primary Accession	Q6P3D0
Other Accession	NM_029385 , NP_083661
Reactivity	Human, Mouse, Rat, Rabbit, Dog, Guinea Pig, Horse, Bovine, Sheep
Predicted	Human, Rat, Pig, Dog, Guinea Pig, Horse, Bovine
Host	Rabbit
Clonality	Polyclonal
Calculated MW	21825

Additional Information

Gene ID	75686
Alias Symbol	2310041H06Rik, 2810047L04Rik, 2900006H04Rik, AI851783
Other Names	U8 snoRNA-decapping enzyme, 3.6.1.62, IDP phosphatase, IDPase, 3.6.1.-, Inosine diphosphate phosphatase, Nucleoside diphosphate-linked moiety X motif 16, Nudix motif 16, m7GpppN-mRNA hydrolase, Nudt16
Format	Liquid. Purified antibody supplied in 1x PBS buffer with 0.09% (w/v) sodium azide and 2% sucrose.
Reconstitution & Storage	Add 50 ul of distilled water. Final anti-Nudt16 antibody concentration is 1 mg/ml in PBS buffer with 2% sucrose. For longer periods of storage, store at 20°C. Avoid repeat freeze-thaw cycles.
Precautions	Nudt16 antibody - N-terminal region is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	Nudt16
Function	RNA-binding and decapping enzyme that catalyzes the cleavage of the cap structure of snoRNAs and mRNAs in a metal-dependent manner. Part of the U8 snoRNP complex that is required for the accumulation of mature 5.8S and 28S rRNA. Has diphosphatase activity and removes m7G and/or m227G caps from U8 snoRNA and leaves a 5'monophosphate on the RNA. Also catalyzes the cleavage of the cap structure on mRNAs. Does not hydrolyze cap analog structures like 7-methylguanosine nucleoside triphosphate (m7GpppG). Also hydrolysis m7G- and m227G U3-capped RNAs but with less efficiencies. Has broad substrate specificity with manganese or cobalt as cofactor and can act

on various RNA species. Binds to the U8 snoRNA; metal is not required for RNA-binding. May play a role in the regulation of snoRNAs and mRNAs degradation (By similarity). Also acts as a phosphatase; hydrolyzes the non-canonical purine nucleotides inosine diphosphate (IDP) and deoxyinosine diphosphate (dITP) as well as guanosine diphosphate (GDP), deoxyguanosine diphosphate (dGDP), xanthine diphosphate (XDP), inosine triphosphate (ITP) and deoxyinosine triphosphate (ITP) to their respective monophosphate derivatives and does not distinguish between the deoxy- and ribose forms. The order of activity with different substrates is IDP > dIDP >> GDP = dGDP > XDP = ITP = dITP. Binds strongly to GTP, ITP and XTP. Participates in the hydrolysis of dIDP/IDP and probably excludes non-canonical purines from RNA and DNA precursor pools, thus preventing their incorporation into RNA and DNA and avoiding chromosomal lesions. Exhibits decapping activity towards NAD-capped RNAs and FAD-capped RNAs (By similarity). Exhibits decapping activity towards dpCoA-capped RNAs in vitro (PubMed:[32432673](#)).

Cellular Location

Nucleus {ECO:0000250|UniProtKB:Q96DE0}. Nucleus, nucleolus {ECO:0000250|UniProtKB:Q6TEC1}. Nucleus, nucleoplasm {ECO:0000250|UniProtKB:Q6TEC1}. Cytoplasm {ECO:0000250|UniProtKB:Q96DE0}. Note=Localized predominantly in the cytoplasm. Localized in nucleolus, and in a minor proportion in distinct foci in the nucleoplasm. {ECO:0000250|UniProtKB:Q6TEC1, ECO:0000250|UniProtKB:Q96DE0}

Tissue Location

Expressed in brain, testis, spleen, lung, heart, liver, kidney and muscle (at protein level)

References

Carninci P.,et al.Science 309:1559-1563(2005).
Song M.G.,et al.Mol. Cell 40:423-432(2010).
Abolhassani N.,et al.Nucleic Acids Res. 38:2891-2903(2010).
Iyama T.,et al.Nucleic Acids Res. 38:4834-4843(2010).

Images



WB Suggested Anti-Nudt16 Antibody Titration: 1.0 µg/ml
Positive Control: Mouse Small Intestine

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.