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NUDT3 Antibody - middle region

Rabbit Polyclonal Antibody
Catalog # AI15627

Product Information

Application	WB
Primary Accession	O95989
Other Accession	NM_006703, NP_006694
Reactivity	Human, Mouse, Rat, Rabbit, Zebrafish, Pig, Dog, Guinea Pig, Horse, Bovine
Predicted	Human, Mouse, Rat, Rabbit, Zebrafish, Pig, Dog, Guinea Pig, Horse, Bovine
Host	Rabbit
Clonality	Polyclonal
Calculated MW	19471

Additional Information

Gene ID	11165
Alias Symbol	DIPP, DIPP-1, DIPP1
Other Names	Diphosphoinositol polyphosphate phosphohydrolase 1, DIPP-1, 3.6.1.52, Diadenosine 5', 5'''-P1, P6-hexaphosphate hydrolase 1, 3.6.1.-, Nucleoside diphosphate-linked moiety X motif 3, Nudix motif 3, NUDT3, DIPP, DIPP1
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-NUDT3 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	NUDT3 Antibody - middle region is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

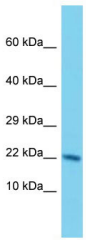
Name	NUDT3 (HGNC:8050)
Synonyms	DIPP, DIPP1
Function	Cleaves a beta-phosphate from the diphosphate groups in PP- InsP5 (diphosphoinositol pentakisphosphate) and [PP]2-InsP4 (bisdiphosphoinositol tetrakisphosphate), suggesting that it may play a role in signal transduction (PubMed:10585413, PubMed:12370170, PubMed:9822604). InsP6 (inositol hexakisphosphate) is not a substrate (PubMed:9822604). Acts as a negative regulator of the ERK1/2 pathway (By similarity). Also able to catalyze the hydrolysis of dinucleoside oligophosphates, with diadenosine

	5',5'''-P1,P6-hexaphosphate (Ap6A) and diadenosine 5',5'''-P1,P5-pentaphosphate (Ap5A) being the preferred substrates (PubMed:10419486, PubMed:12370170). The major reaction products are ADP and p4a from Ap6A and ADP and ATP from Ap5A (PubMed:12370170). Also able to hydrolyze 5-phosphoribose 1-diphosphate (PubMed:12370170). Acts as a decapping enzyme that modulates the stability of a subset of mRNAs implicated in cell motility (PubMed:26932476). Hydrolyzes monomethylated capped RNA after both the alpha- and beta-phosphates generating m7GMP + ppRNA and m7GDP + pRNA (PubMed:32727897). Can hydrolyze unmethylated capped RNAs (By similarity). Divalent cations zinc, magnesium and manganese determine its substrate specificity (PubMed:34788624). Exhibits diphosphoinositol polyphosphate phosphohydrolase in the presence of magnesium ions, diadenosine hexaphosphate hydrolase activity in the presence of manganese ions and endopolyphosphatase activity in the presence of zinc ions (PubMed:34788624). Plays an important role in limiting DNA damage and maintaining cell survival upon oxidative stress via its endopolyphosphatase activity (PubMed:34788624).
Cellular Location	Cytoplasm. Nucleus
Tissue Location	Widely expressed. Expressed at higher level in brain, heart, pancreas and liver. Also expressed in placenta, lung and kidney.

References

Safrany S.T.,et al.EMBO J. 17:6599-6607(1998).
Kalnine N.,et al.Submitted (OCT-2004) to the EMBL/GenBank/DDBJ databases.
Ota T.,et al.Nat. Genet. 36:40-45(2004).
Mungall A.J.,et al.Nature 425:805-811(2003).
Mural R.J.,et al.Submitted (JUL-2005) to the EMBL/GenBank/DDBJ databases.

Images



Host: Rabbit
Target Name: NUDT3
Sample Tissue: Hela Whole cell lysate
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Antibody Dilution: 1.0μg/mlNUDT3 is supported by BioGPS gene expression data to be expressed in HeLa