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RNT2 Antibody (N-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP10764a

Product Information

Application	WB, IHC-P, E
Primary Accession	O00584
Other Accession	NP_003721.2
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB24925
Calculated MW	29481
Antigen Region	25-55

Additional Information

Gene ID	8635
Other Names	Ribonuclease T2, 3127-, Ribonuclease 6, RNASET2, RNASE6PL
Target/Specificity	This RNT2 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 25-55 amino acids from the N-terminal region of human RNT2.
Dilution	WB~~1:1000 IHC-P~~1:100~500 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.05% (V/V) Proclin 300. 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	RNT2 Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	RNASET2 (HGNC:21686)
Synonyms	RNASE6PL
Function	Ribonuclease that plays an essential role in innate immune response by recognizing and degrading RNAs from microbial pathogens that are

	subsequently sensed by TLR8 (PubMed:31778653). Cleaves preferentially single-stranded RNA molecules between purine and uridine residues, which critically contributes to the supply of catabolic uridine and the generation of purine-2',3'-cyclophosphate-terminated oligoribonucleotides (PubMed:31778653, PubMed:38697119). In turn, RNase T2 degradation products promote the RNA-dependent activation of TLR8 (PubMed:31778653). In plasmacytoid dendritic cells, it cooperates with PLD3 or PLD4 5'->3' exonucleases to process RNA fragments and release 2',3'-cyclic guanosine monophosphate (2',3'-cGMP), a potent stimulatory ligand for TLR7 (PubMed:38697119). Also plays a key role in degradation of mitochondrial RNA and processing of non-coding RNA imported from the cytosol into mitochondria (PubMed:28730546, PubMed:30184494). Participates as well in degradation of mitochondrion-associated cytosolic rRNAs (PubMed:30385512).
Cellular Location	Secreted. Lysosome lumen. Endoplasmic reticulum lumen. Mitochondrion intermembrane space. Note=Full-length RNASET2 is found in the endoplasmic reticulum while smaller RNASET2 proteolytic products are found in the lysosome fraction.
Tissue Location	Ubiquitous. Higher expression levels observed in the temporal lobe and fetal brain.

Background

This ribonuclease gene is a novel member of the Rh/T2/S-glycoprotein class of extracellular ribonucleases. It is a single copy gene that maps to 6q27, a region associated with human malignancies and chromosomal rearrangement.

References

Fransen, K., et al. Hum. Mol. Genet. 19(17):3482-3488(2010)
Quan, C., et al. Nat. Genet. 42(7):614-618(2010)
Liu, J., et al. J. Cell. Mol. Med. 14(5):1146-1155(2010)
Henneke, M., et al. Nat. Genet. 41(7):773-775(2009)
Monti, L., et al. Oncol. Res. 17(2):69-74(2008)

Citations

- Regulation of mitochondrion-associated cytosolic ribosomes by mammalian mitochondrial ribonuclease T2 (RNASET2).

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