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PNPT1 Rabbit pAb

Catalog # AP100205

Product Information

Application	IHC-P, IHC-F, IF, E
Primary Accession	Q8TCS8
Other Accession	Q8TCS8
Predicted	Rat, Human, Mouse, Dog, Horse, Sheep
Host	Rabbit
Clonality	Polyclonal
Calculated MW	85951
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human PNPT1
Epitope Specificity	551-650/783
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SIMILARITY	Belongs to the polyribonucleotide nucleotidyltransferase family. Contains 1 KH domain. Contains 1 S1 motif domain.
SUBUNIT	Homotrimer; in free form. Homooligomer. Component of the mitochondrial degradosome (mtEXO) complex which is a heteropentamer containing 2 copies of SUPV3L1 and 3 copies of PNPT1. Interacts with TCL1A; the interaction has no effect on PNPT1 exonuclease activity.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	PNPT1 is a subunit of the exosome complex, which is involved in 3-prime-to-5-prime exoribonuclease activity for RNA processing and degradation. It contains one KH domain and one S1 motif domain.

Additional Information

Gene ID	87178
Other Names	COXPD13; DFNB70; OLD35; PNPASE; SCA25; old-35; PNPT1_HUMAN; PNPT1; 3'-5' RNA exonuclease OLD35; PNPase old-35; Polynucleotide phosphorylase 1 (PNPase 1); Polynucleotide phosphorylase-like protein; 2.7.7.8; polyribonucleotide nucleotidyltransferase 1; deafness, autosomal recessive 70; polynucleotide phosphorylase; 3'-5' RNA exonuclease
Dilution	IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500,ELISA=1:5000-10000
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	PNPT1 (HGNC:23166)
Synonyms	PNPASE
Function	RNA-binding protein implicated in numerous RNA metabolic processes (PubMed:29967381, PubMed:39019044). Catalyzes the phosphorolysis of single-stranded polyribonucleotides processively in the 3'-to-5' direction (PubMed:29967381, PubMed:39019044). Mitochondrial intermembrane factor with RNA-processing exoribonulease activity (PubMed:29967381, PubMed:39019044). Component of the mitochondrial degradosome (mtEXO) complex, that degrades 3' overhang double-stranded RNA with a 3'-to-5' directionality in an ATP-dependent manner (PubMed:29967381, PubMed:39019044). Involved in the degradation of non-coding mitochondrial transcripts (MT-ncRNA) and tRNA-like molecules (PubMed:29967381, PubMed:39019044). Required for correct processing and polyadenylation of mitochondrial mRNAs. Plays a role as a cytoplasmic RNA import factor that mediates the translocation of small RNA components, like the 5S RNA, the RNA subunit of ribonuclease P and the mitochondrial RNA-processing (MRP) RNA, into the mitochondrial matrix. Plays a role in mitochondrial morphogenesis and respiration; regulates the expression of the electron transport chain (ETC) components at the mRNA and protein levels. In the cytoplasm, shows a 3'-to-5' exoribonuclease mediating mRNA degradation activity; degrades c-myc mRNA upon treatment with IFNB1/IFN-beta, resulting in a growth arrest in melanoma cells. Regulates the stability of specific mature miRNAs in melanoma cells; specifically and selectively degrades miR-221, preferentially. Also plays a role in RNA cell surveillance by cleaning up oxidized RNAs. Binds to the RNA subunit of ribonuclease P, MRP RNA and miR-221 microRNA.
Cellular Location	Cytoplasm. Mitochondrion matrix. Mitochondrion intermembrane space; Peripheral membrane protein

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