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[Marker Primary Antibody]

Rabbit Anti-PNPT1/AF647 Conjugated antibody

Catalog Number: SL7100R-AF647

FOR RESEARCH USE ONLY

[DATASHEET]

Host:	Rabbit
Isotype:	IgG
Clonality:	Polyclonal
Target:	Anti-PNPT1/AF647
Immunogen:	KLH conjugated synthetic peptide derived from human PNPT1
Purification:	affinity purified by Protein A
Concentration:	1mg/ml
Storage:	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. The lyophilized antibody is stable at room temperature for at least one month and for greater than a year when kept at -20°C. When reconstituted in sterile pH 7.4 1M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.
Applications:	IF=1:100-500 not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Reactivity:	(predicted:Human,Mouse,Rat,Dog,Cow,Horse,Sheep)
Background:	background: 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. **Function:** RNA-binding protein implicated in numerous RNA metabolic processes. Hydrolyzes single-stranded polyribonucleotides processively in the 3'-to-5' direction. Mitochondrial intermembrane factor with RNA-processing exoribonulease activity. 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. 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

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	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. Plays also 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. **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. **Subcellular Location:** Cytoplasm. Mitochondrion. Mitochondrion intermembrane space; Peripheral membrane protein. **Similarity:** Belongs to the polyribonucleotide nucleotidyltransferase family. Contains 1 KH domain. Contains 1 S1 motif domain. **Database links:** UniProtKB/Swiss-Prot: Q8TCS8.2 Important **Note:** This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.