

**PNPase Polyclonal Antibody** 

Catalog # AP71990

# Specification

# **PNPase Polyclonal Antibody - Product Information**

Application Primary Accession Reactivity Host Clonality WB, IHC-P <u>O8TCS8</u> Human, Mouse Rabbit Polyclonal

# **PNPase Polyclonal Antibody - Additional Information**

Gene ID 87178

**Other Names** PNPT1; PNPASE; Polyribonucleotide nucleotidyltransferase 1; mitochondrial; 3'-5' RNA exonuclease OLD35; PNPase old-35; Polynucleotide phosphorylase 1; PNPase 1; Polynucleotide phosphorylase-like protein

# Dilution WB~~Western Blot: 1/500 - 1/2000. Immunohistochemistry: 1/100 - 1/300. ELISA: 1/20000. Not yet tested in other applications. IHC-P~~N/A

**Format** Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.09% (W/V) sodium azide.

Storage Conditions -20°C

# **PNPase Polyclonal Antibody - Protein Information**

Name PNPT1 (HGNC:23166)

Synonyms PNPASE

#### Function

RNA-binding protein implicated in numerous RNA metabolic processes (PubMed:<a href="http://www.uniprot.org/citations/29967381" target="\_blank">29967381</a>, PubMed:<a href="http://www.uniprot.org/citations/39019044" target="\_blank">39019044</a>). Catalyzes the phosphorolysis of single-stranded polyribonucleotides processively in the 3'-to-5' direction (PubMed:<a href="http://www.uniprot.org/citations/29967381" target="\_blank">29967381</a>, PubMed:<a href="http://www.uniprot.org/citations/29967381" target="\_blank">39019044</a>). Mitochondrial intermembrane factor with RNA-processing exoribonulease activity (PubMed:<a href="http://www.uniprot.org/citations/29967381" target="\_blank">29967381</a>, PubMed:<a href="http://www.uniprot.org/citations/29967381" target="\_blank">29967381</a>, PubMed:<a href="http://www.uniprot.org/citations/29967381" target="\_blank">39019044</a>). Mitochondrial intermembrane factor with RNA-processing exoribonulease activity (PubMed:<a href="http://www.uniprot.org/citations/39019044" target="\_blank">39019044</a>). 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: <a

href="http://www.uniprot.org/citations/29967381" target=" blank">29967381</a>, PubMed:<a href="http://www.uniprot.org/citations/39019044" target=" blank">39019044</a>). Involved in the degradation of non-coding mitochondrial transcripts (MT-ncRNA) and tRNA-like molecules (PubMed:<a href="http://www.uniprot.org/citations/29967381" target=" blank">29967381</a>, PubMed:<a href="http://www.uniprot.org/citations/39019044" target=" blank">39019044</a>). 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

# **PNPase Polyclonal Antibody - Protocols**

Provided below are standard protocols that you may find useful for product applications.

- <u>Western Blot</u>
- <u>Blocking Peptides</u>
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- <u>Cell Culture</u>

# **PNPase Polyclonal Antibody - Images**





# **PNPase Polyclonal Antibody - Background**

RNA-binding protein implicated in numerous RNA metabolic processes. Catalyzes the phosphorolysis of 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 mRNA-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. 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.