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PITRM1 Antibody (Center) Blocking peptide
Synthetic peptide
Catalog # BP12390c

Specification

PITRM1 Antibody (Center) Blocking peptide - Product Information

Primary Accession Q5JRX3

PITRM1 Antibody (Center) Blocking peptide - Additional Information

Gene ID 10531

Other Names
Presequence protease, mitochondrial, hPreP, 3424-, Pitrilysin metalloproteinase 1, Metalloprotease 1, hMP1, PITRM1, KIAA1104, MP1

Format
Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions
This product is for research use only. Not for use in diagnostic or therapeutic procedures.

PITRM1 Antibody (Center) Blocking peptide - Protein Information

Name PITRM1 (HGNC:17663)

Function
Metalloendopeptidase of the mitochondrial matrix that functions in peptide cleavage and degradation rather than in protein processing (PubMed:10360838, PubMed:16849325, PubMed:19196155, PubMed:24931469). Has an ATP-independent activity (PubMed:16849325). Specifically cleaves peptides in the range of 5 to 65 residues (PubMed:19196155). Shows a preference for cleavage after small polar residues and before basic residues, but without any positional preference (PubMed:10360838, PubMed:19196155, PubMed:24931469). Degrades the transit peptides of mitochondrial proteins after their cleavage (PubMed:19196155). Also degrades other unstructured peptides (PubMed:19196155). It is also able

to degrade amyloid-beta protein 40, one of the peptides produced by APP processing, when it accumulates in mitochondrion (PubMed:16849325, PubMed:24931469, PubMed:26697887). It is a highly efficient protease, at least toward amyloid-beta protein 40 (PubMed:24931469, PubMed:29383861, PubMed:29764912). Cleaves that peptide at a specific position and is probably not processive, releasing digested peptides intermediates that can be further cleaved subsequently (PubMed:24931469). It is also able to degrade amyloid-beta protein 42 (PubMed:29764912).

Cellular Location
Mitochondrion. Mitochondrion matrix

Tissue Location
Widely expressed. Expressed at higher level in muscle and heart compared to brain, pancreas, liver, lung and placenta

PITRM1 Antibody (Center) Blocking peptide - Protocols

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

- Blocking Peptides

PITRM1 Antibody (Center) Blocking peptide - Images

PITRM1 Antibody (Center) Blocking peptide - Background

ATP-independent protease that degrades mitochondrial transit peptides after their cleavage. Also degrades other unstructured peptides. Specific for peptides in the range of 10 to 65 residues. Able to degrade amyloid beta A4 (APP) protein when it accumulates in mitochondrion, suggesting a link with Alzheimer disease. Shows a preference for cleavage after small polar residues and before basic residues, but without any positional preference.

PITRM1 Antibody (Center) Blocking peptide - References

Yoshida, T., et al. Int. J. Mol. Med. 25(4):649-656(2010)Pinho, C.M., et al. Neurosci. Lett. 469(2):204-208(2010)Oguri, M., et al. Am. J. Hypertens. 23(1):70-77(2010)Yoshida, T., et al. Int. J. Mol. Med. 24(4):539-547(2009)Chow, K.M., et al. Biochemistry 48(13):2868-2877(2009)