

Mouse Enpp1 Blocking Peptide (N-term)
Synthetic peptide
Catalog # BP19754a**Specification**

Mouse Enpp1 Blocking Peptide (N-term) - Product InformationPrimary Accession [P06802](#)**Mouse Enpp1 Blocking Peptide (N-term) - Additional Information****Gene ID** 18605**Other Names**

Ectonucleotide pyrophosphatase/phosphodiesterase family member 1, E-NPP 1, Lymphocyte antigen 41, Ly-41, Phosphodiesterase I/nucleotide pyrophosphatase 1, Plasma-cell membrane glycoprotein PC-1, Alkaline phosphodiesterase I, Nucleotide pyrophosphatase, NPPase, Enpp1, Npps, Pc1, Pdnpl

Target/Specificity

The synthetic peptide sequence is selected from aa 44-57 of MOUSE Enpp1

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.

Mouse Enpp1 Blocking Peptide (N-term) - Protein Information**Name** Enpp1 {ECO:0000303|PubMed:23027977, ECO:0000312|MGI:MGI:97370}**Function**

Nucleotide pyrophosphatase that generates diphosphate (PPi) and functions in bone mineralization and soft tissue calcification by regulating pyrophosphate levels (PubMed:9662402, PubMed:10352096, PubMed:11004006, PubMed:12082181, PubMed:22510396, PubMed:25260930). PPi inhibits bone mineralization and soft tissue calcification by binding to nascent hydroxyapatite crystals, thereby preventing further growth of these crystals (PubMed:9662402, PubMed:10352096, PubMed:11004006, PubMed:12082181, PubMed:22510396, PubMed:25260930).

[11004006](http://www.uniprot.org/citations/11004006), PubMed:12082181, PubMed:19419305, PubMed:22510396, PubMed:25260930, PubMed:25479107, PubMed:26910915, PubMed:30111653, PubMed:35147247). Preferentially hydrolyzes ATP, but can also hydrolyze other nucleoside 5' triphosphates such as GTP, CTP and UTP to their corresponding monophosphates with release of pyrophosphate, as well as diadenosine polyphosphates, and also 3',5'-cAMP to AMP (PubMed:11027689, PubMed:1647027, PubMed:23027977, PubMed:8223581). May also be involved in the regulation of the availability of nucleotide sugars in the endoplasmic reticulum and Golgi, and the regulation of purinergic signaling (PubMed:1647027). Inhibits ectopic joint calcification and maintains articular chondrocytes by repressing hedgehog signaling; it is however unclear whether hedgehog inhibition is direct or indirect (PubMed:30111653). Appears to modulate insulin sensitivity (By similarity). Also involved in melanogenesis (By similarity). Also able to hydrolyze 2',3'-cGAMP (cyclic GMP-AMP), a second messenger that activates TMEM173/STING and triggers type-I interferon production (PubMed:25344812). 2',3'-cGAMP degradation takes place in the lumen or extracellular space, and not in the cytosol where it is produced; the role of 2',3'-cGAMP hydrolysis is therefore unclear (By similarity). Not able to hydrolyze the 2',3'-cGAMP linkage isomer 3',3'-cGAMP (By similarity).

Cellular Location

[Ectonucleotide pyrophosphatase/phosphodiesterase family member 1]: Cell membrane; Single-pass type II membrane protein. Basolateral cell membrane; Single-pass type II membrane protein. Note=Targeted to the basolateral membrane in polarized epithelial cells and in hepatocytes, and to matrix vesicles in osteoblasts.

Tissue Location

Selectively expressed on the surface of antibody-secreting cells (PubMed:3104326). Expressed in osteocytes and osteoclasts (PubMed:25260930).

Mouse Enpp1 Blocking Peptide (N-term) - Protocols

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

- [Blocking Peptides](#)

Mouse Enpp1 Blocking Peptide (N-term) - Images

Mouse Enpp1 Blocking Peptide (N-term) - Background

Involved primarily in ATP hydrolysis at the plasma membrane. Plays a role in regulating pyrophosphate levels, and functions in bone mineralization and soft tissue calcification. In vitro, has a broad specificity, hydrolyzing other nucleoside 5' triphosphates such as GTP, CTP, TTP and UTP to their corresponding monophosphates with release of pyrophosphate and diadenosine polyphosphates, and also 3',5'-cAMP to AMP. May also be involved in the regulation of the availability of nucleotide sugars in the endoplasmic reticulum and Golgi, and the regulation of purinergic signaling. Appears to modulate insulin sensitivity (By similarity).