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Mouse Enpp1 Antibody (N-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP19754a

Product Information

Application	WB, E
Primary Accession	P06802
Reactivity	Human, Mouse
Predicted	Rat, Bovine, Canine, Rabbit
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB30657
Calculated MW	103176
Antigen Region	29-57

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, Pdnp1
Target/Specificity	This Mouse Enpp1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 29-57 amino acids from the N-terminal region of mouse Enpp1.
Dilution	WB~~1:1000 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	Mouse Enpp1 Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	Enpp1 {ECO:0000303|PubMed:23027977, ECO:0000312|MGI:MGI:97370}

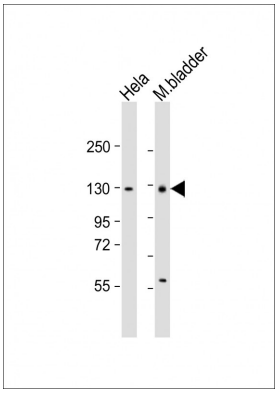
Function	Nucleotide pyrophosphatase that generates diphosphate (PPi) and functions in bone mineralization and soft tissue calcification by regulating pyrophosphate levels (PubMed:10352096, PubMed:11004006, PubMed:12082181, PubMed:22510396, PubMed:25260930, PubMed:9662402). PPi inhibits bone mineralization and soft tissue calcification by binding to nascent hydroxyapatite crystals, thereby preventing further growth of these crystals (PubMed:10352096, PubMed:11004006, PubMed:12082181, PubMed:19419305, PubMed:22510396, PubMed:25260930, PubMed:25479107, PubMed:26910915, PubMed:30111653, PubMed:35147247, PubMed:9662402). 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).

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).

Images

All lanes : Anti-Enpp1 Antibody (N-term) at 1:1000 dilution Lane 1: Hela whole cell lysate Lane 2: mouse bladder lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 103 kDa Blocking/Dilution buffer: 5% NFDM/TBST.



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