10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

ENPP3 Recombinant Rabbit mAb

Catalog # AP97139

Product Information

Application	WB, IHC-P, IHC-F, IF
Primary Accession	O14638
Other Accession	O14638
Reactivity	Rat, Human, Mouse
Host	Rabbit
Clonality	Recombinant
Calculated MW	100124
Physical State	Liquid
Immunogen	Recombinant human ENPP3 protein
Epitope Specificity	526-875/875
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SIMILARITY	Belongs to the nucleotide pyrophosphatase/phosphodiesterase family. Contains 2 SMB (somatomedin-B) domains.
Post-translational modifications	N-glycosylation is necessary for correct trafficking to the apical surface, but is not the apical targeting signal. It has been suggested that the active SMB domain may be permitted considerable disulfide bond heterogeneity or variability, thus two alternate disulfide patterns based on 3D structures are described with 1 disulfide bond conserved in both.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	The protein encoded by this gene belongs to a series of ectoenzymes that are involved in hydrolysis of extracellular nucleotides. These ectoenzymes possess ATPase and ATP pyrophosphatase activities and are type II transmembrane proteins. Expression of the related rat mRNA has been found in a subset of immature glial cells and in the alimentary tract. The corresponding rat protein has been detected in the pancreas, small intestine, colon, and liver. The human mRNA is expressed in glioma cells, prostate, and uterus. Expression of the human protein has been detected in uterus, basophils, and mast cells.

Additional Information

Gene ID	5169
Other Names	B10; CD203c; NPP3; PD-IBETA; PDNP3; ENPP3_HUMAN; ENPP3; E-NPP 3; Alkaline phosphodiesterase I; Dinucleoside polyphosphatase; Nucleotide diphosphatase; Nucleotide pyrophosphatase (NPPase); Phosphodiesterase I beta (PD-Ibeta); Phosphodiesterase I/nucleotide pyrophosphatase 3; ectonucleotide pyrophosphatase/phosphodiesterase 3
Dilution	WB=1:500-2000,IHC-P=1:100-500,IF=1:100-500,IHC-F=1:100-500

Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

Protein Information

Name	ENPP3 (HGNC:3358)
Function	Hydrolase that metabolizes extracellular nucleotides, including ATP, GTP, UTP and CTP (PubMed:29717535, PubMed:9344668). Also hydrolyzes extracellular 2',3'-cGAMP (cyclic GMP-AMP), a second messenger that activates TMEM173/STING and triggers type-I interferon production, and is therefore involved in the regulation of innate immune response (PubMed:38749434). 2',3'-cGAMP appears to be further processed to GMP, AMP and inorganic phosphate (PubMed:38749434). Limits mast cells and basophils response during inflammation and during the chronic phases of allergic responses by eliminating extracellular ATP, a signaling molecule activating these cells in an autocrine manner. Metabolizes extracellular ATP in the lumen of the small intestine, and thereby prevents ATP-induced apoptosis of intestinal plasmacytoid dendritic cells (By similarity). Has a broad specificity and can also hydrolyze UDP-GlcNAc into UMP and GlcNAc-1-phosphate and potentially several other intracellular nucleotide sugars, including UDP-GalNAc, CMP-NeuAc, GDP-Fuc, and UDP-GlcA. Thereby, could modulate glycan biosynthesis and protein glycosylation (By similarity). Can hydrolyze extracellular dinucleoside polyphosphates, including the vasoactive adenosine polyphosphates as well (PubMed:12846830). In addition, displays an alkaline phosphodiesterase activity in vitro (PubMed:11342463).
Cellular Location	Cell membrane; Single-pass type II membrane protein. Apical cell membrane; Single-pass type II membrane protein. Secreted Note=Detected at the cell surface of basophils (PubMed:11342463) Detected at the apical plasma membrane of bile duct cells (PubMed:15072822). Located to the apical surface in intestinal and kidney epithelial cells. Secreted in serum, and in lumen of epithelial cells.
Tissue Location	Detected on bile ducts in liver, and in blood serum (at protein level) (PubMed:15072822). Detected in prostate and uterus (PubMed:9344668). Detected on basophils, but not neutrophils (PubMed:11342463).

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.