ENPP1 Rabbit pAb

CatalogNo: YN2977

Key Features

Host Species
- Rabbit

Reactivity
- Human,Mouse,Rat

Applications
- WB,ELISA

MW
- 101kD (Observed)

Isotype
- IgG

Recommended Dilution Ratios

WB 1:500-2000
ELISA 1:5000-20000

Storage

Storage*	-15°C to -25°C/1 year(Do not lower than -25°C)
Formulation	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.

Basic Information

Clonality	Polyclonal

Immunogen Information

Immunogen	Synthesized peptide derived from part region of human protein. AA range: 260-300
Specificity	ENPP1 Polyclonal Antibody detects endogenous levels of protein.

Target Information

Gene name	ENPP1 M6S1 NPPS PC1 PDNP1

Protein Name Ectonucleotide pyrophosphatase/phosphodiesterase family member 1 (E-NPP 1) (Membrane component chromosome 6 surface marker 1) (Phosphodiesterase I/nucleotide pyrophosphatase 1) (Plasma-cell membrane glycoprotein PC-1) [Includes: Alkaline phosphodiesterase I (EC 3.6.1.9)]

Organism	Gene ID	UniProt ID
Human	5167;	P22413;
Mouse		P06802;
Rat		Q924C3;

Cellular Localization [Ectonucleotide pyrophosphatase/phosphodiesterase family member 1]: Cell membrane ; Single-pass type II membrane protein. Basolateral cell membrane ; Single-pass type II membrane protein. Targeted to the basolateral membrane in polarized epithelial cells and in hepatocytes, and to matrix vesicles in osteoblasts (PubMed:11598187). In bile duct cells and cancer cells, located to the apical cytoplasmic side (PubMed:11598187). .; [Ectonucleotide pyrophosphatase/phosphodiesterase family member 1, secreted form]: Secreted . Secreted following proteolytic cleavage. .

Tissue specificity Expressed in plasma cells and also in a number of non-lymphoid tissues, including the distal convoluted tubule of the kidney, chondrocytes and epididymis (PubMed:9344668). Expressed in melanocytes but not in keratinocytes (PubMed:28964717).

Function Catalytic activity:A dinucleotide + H(2)O = 2 mononucleotides.,Catalytic activity:Hydrolytically removes 5'-nucleotides successively from the 3'-hydroxy termini of 3'-hydroxy-terminated oligonucleotides.,Caution:It is uncertain whether Met-1 or Met-53 is the initiator.,cofactor:Binds 2 divalent metal cations per subunit.,Disease:Defects in ENPP1 are a cause of idiopathic infantile arterial calcification (IIAC) [MIM:208000]; also called generalized arterial calcification of infancy. IIAC is characterized by calcification of the internal elastic lamina of muscular arteries and stenosis due to myointimal proliferation.,Disease:Defects in ENPP1 are a cause of increased susceptibility for ossification of the posterior longitudinal ligament of the spine (OPLL) [MIM:602475]. OPLL is a common form of human myelopathy with a prevalence of as much as 4% in a variety of ethnic groups.,Disease:Defects in ENPP1 are associated with obesity, glucose intolerance, and type II diabetes non-insulin dependent (NIDDM) [MIM:125853].,Domain:The di-leucine motif is required for basolateral targeting in epithelial cells, and for targeting to matrix vesicles derived from mineralizing cells.,enzyme regulation:At low concentrations of ATP, a phosphorylated intermediate is formed which inhibits further hydrolysis.,Function: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.,PTM:Autophosphorylated as part of the catalytic cycle of phosphodiesterase/pyrophosphatase activity.,PTM: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.,PTM:N-glycosylated.,similarity:Belongs to the nucleotide pyrophosphatase/phosphodiesterase family.,similarity:Contains 2 SMB (somatomedin-B) domains.,subcellular location:Targeted to the basolateral membrane in polarized epithelial cells and in hepatocytes, and to matrix vesicles in osteoblasts. In bile duct cells and cancer cells, located to the apical cytoplasmic side.,subunit:Homodimer; disulfide-linked.,tissue specificity:Expressed in plasma cells and also in a number of non-lymphoid tissues, including the distal convoluted tubule of the kidney, chondrocytes and epididymis.,

Validation Data

Contact information

Orders:	order.cn@immunoway.com
Support:	support.cn@immunoway.com
Telephone:	400-8787-807(China)
Website:	http://www.immunoway.com.cn
Address:	2200 Ringwood Ave San Jose, CA 95131 USA

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