

Datasheet for ABIN7581869
anti-ENPP1 antibody (Extracellular)



[Go to Product page](#)

Overview

Quantity:	50 µL
Target:	ENPP1
Binding Specificity:	AA 711-725, Extracellular
Reactivity:	Human
Host:	Rabbit
Clonality:	Polyclonal
Conjugate:	This ENPP1 antibody is un-conjugated
Application:	Western Blotting (WB), Immunohistochemistry (IHC), Flow Cytometry (FACS), Live Cell Imaging (LCI)

Product Details

Purpose:	A Rabbit Polyclonal antibody to ENPP1 (extracellular)
Immunogen:	CLYQDFRIPLSPVHK, corresponding to amino acid residues 711 - 725 of human ENPP1
Sequence:	CLYQDFRIPL SPVHK
Isotype:	IgG
Specificity:	Extracellular, C-term.
Predicted Reactivity:	Mouse - 14 out of 15 amino acid residues identical, Rat- 13 out of 15 amino acid residues identical
Characteristics:	Anti-ENPP1 (extracellular) Antibody (ABIN7581869) is a highly specific antibody directed against an extracellular epitope of the human protein. The antibody can be used in western blot,

Product Details

immunohistochemistry and flow cytometry applications. It has been designed to recognize ENPP1 from mouse, rat and human samples.

Purification: Affinity purified on immobilized antigen.

Target Details

Target: ENPP1

Alternative Name: ENPP1 ([ENPP1 Products](#))

Background: Ectonucleotide Pyrophosphatase/ Phosphodiesterase Family Member 1, Plasma-Cell Membrane Glycoprotein PC-1, CD203a, Membrane Component Chromosome 6 Surface Marker 1, M6S1, Ectonucleotide Pyrophosphatase/Phosphodiesterase 1 (ENPP1), also known as Plasma-Cell Membrane Glycoprotein (PC-1) and CD203a, is a member the ecto-enzyme ENPP family that includes seven members (ENPP1-ENPP7)¹. ENPP1 is involved in purinergic signaling as it catalyzes the hydrolysis of ATP or GTP to AMP or GMP, while generating inorganic pyrophosphates (PPi)^{1,2}. Inorganic pyrophosphates inhibit bone and cartilage mineralization, hence making ENPP1 a key regulator of bone and cartilage development and remodeling^{2,3}. Indeed, several hereditary mineralization or calcification-related disorders, have been linked to loss-of-function mutations of ENPP1, such as general arterial calcification of infancy (GACI) or Cole disease³. Recently, an intriguing new role of ENPP1 as a central regulator of immunity and tumor proliferation came to light. It was shown that ENPP1 is the critical enzyme that degrades the stimulator of interferon genes (STING) ligand, cyclic GMP-AMP (cGAMP)^{4,5}. cGAMP was first described as an intracellular second messenger, synthesized by the enzyme cyclic-GMP-AMP synthase (cGAS) in response to self and pathogenic double-stranded DNA in the cytosol. Intracellular signaling of cGAMP is carried through the STING pathway which then directs several antiviral and anticancer cellular response mechanisms^{4,5}. cGAMP can also be released to the extracellular space where it can be transported into cells by receptors like MERTK⁶, P2X7⁶, SLC19A1⁷ and LRRC8A⁸. ENPP1 is the only known ecto-enzyme that can inactivate extracellular cGAMP to GMP and AMP, and thus functions as an inhibitor of the anti-tumor response elicited by extracellular cGAMP^{4,9}.

Gene ID: 5167

UniProt: [P22413](#)

Pathways: [Regulation of Carbohydrate Metabolic Process](#)

Application Details

Application Notes:	Antigen preadsorption control: 1 µg peptide per 1 µg antibody Application Dilutions Immunohistochemistry paraffin embedded sections ihc: 1:1000 Application Dilutions Western blot wb: 1:200-1:400
Restrictions:	For Research Use only

Handling

Format:	Lyophilized
Reconstitution:	0.2 mL double distilled water (DDW).
Concentration:	1 mg/mL
Buffer:	PBS pH 7.4
Storage:	4 °C,-20 °C
Storage Comment:	Storage before reconstitution: The antibody ships as a lyophilized powder at room temperature. Upon arrival, it should be stored at -20°C. Storage after reconstitution: The reconstituted solution can be stored at 4°C for up to 1 week. For longer periods, small aliquots should be stored at -20°C. Avoid multiple freezing and thawing. Centrifuge all antibody preparations before use (10000 x g 5 min).