

Anti-ENPP1 / PC1 Antibody [PSH12-11]

HA723427



Product Type:	Recombinant Rabbit monoclonal IgG, primary antibodies
Species reactivity:	Human
Applications:	WB, IHC-P
Molecular Wt:	Predicted band size: 105 kDa
Clone number:	PSH12-11

Description: ENPP1 (Ectonucleotide Pyrophosphatase/Phosphodiesterase 1) is a membrane-bound enzyme that hydrolyzes nucleotide triphosphates, such as ATP, into nucleotide monophosphates and pyrophosphate (PPi). It plays a critical role in regulating PPi levels, which are essential for inhibiting bone mineralization and soft tissue calcification. By preventing the growth of hydroxyapatite crystals, ENPP1 helps maintain proper tissue mineralization and prevents ectopic calcification. ENPP1 is involved in multiple physiological processes, including energy metabolism, purinergic signaling, and the regulation of nucleotide sugar availability in the endoplasmic reticulum and Golgi. It also modulates insulin sensitivity and function, contributing to metabolic regulation. Additionally, ENPP1 has been implicated in melanogenesis and the hydrolysis of 2',3'-cGAMP, a secondary messenger involved in immune signaling, although its role in this process remains unclear. Dysregulation or deficiency of ENPP1 is associated with various diseases, including diabetes, obesity, arterial calcification, and autoimmune disorders, making it a significant target for medical research and therapeutic development.

Immunogen: Recombinant protein within human ENPP1 aa 576-925.

Positive control: HepG2 cell lysate, MDA-MB-231 cell lysate, Huh7 cell lysate, human liver tissue.

Subcellular location: Cell membrane, Basolateral cell membrane, Secreted.

Database links: SwissProt: P22413 Human

Recommended Dilutions:

WB	1:5,000
IHC-P	1:1,000

Storage Buffer: 1*PBS (pH7.4), 0.1% BSA, 40% Glycerol, 0.2% Proclean 950.

Storage Instruction: Shipped at 4°C. Store at +4°C short term (1-2 weeks). It is recommended to aliquot into single-use upon delivery. Store at -20°C long term.

Purity: Protein A affinity purified.

Hangzhou Huaan Biotechnology Co., Ltd.

Orders:0086-571-88062880

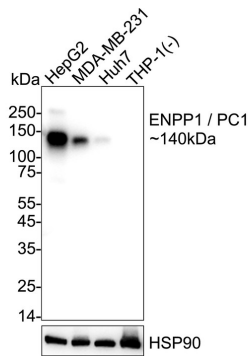
Technical:0086-571-89986345

Service mail:support@huabio.cn

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Images

Fig1: Western blot analysis of ENPP1 / PC1 on different lysates with Rabbit anti-ENPP1 / PC1 antibody (HA723427) at 1/1,000 dilution.



Lane 1: HepG2 cell lysate
 Lane 2: MDA-MB-231 cell lysate
 Lane 3: Huh7 cell lysate
 Lane 4: THP-1 cell lysate (negative)

Lysates/proteins at 20 ug/Lane.

Predicted band size: 105 kDa
 Observed band size: 140 kDa

Exposure time: 10 seconds; ECL: K1801;
 4-20% SDS-PAGE gel.

Proteins were transferred to a PVDF membrane and blocked with 5% NFDN/TBST for 1 hour at room temperature. The primary antibody (HA723427) at 1/5,000 dilution was used in 5% NFDN/TBST at 4°C overnight. Goat Anti-Rabbit IgG - HRP Secondary Antibody (HA1001) at 1/50,000 dilution was used for 1 hour at room temperature.

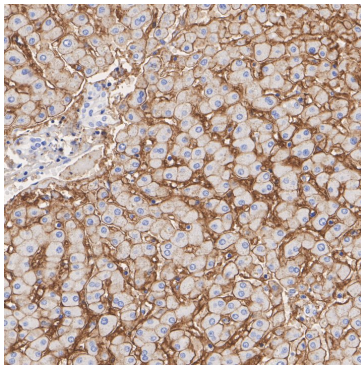


Fig2: Immunohistochemical analysis of paraffin-embedded human liver tissue with Rabbit anti-ENPP1 / PC1 antibody (HA723427) at 1/1,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH₂O and PBS, and then probed with the primary antibody (HA723427) at 1/1,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

Note: All products are "FOR RESEARCH USE ONLY AND ARE NOT INTENDED FOR DIAGNOSTIC OR THERAPEUTIC USE".

Background References

1. Johnson KA, et al. Osteoblast tissue-nonspecific alkaline phosphatase antagonizes and regulates PC-1. *Am J Physiol Regul Integr Comp Physiol*. 2000 Oct.
2. Li L, et al. Hydrolysis of 2'3'-cGAMP by ENPP1 and design of nonhydrolyzable analogs. *Nat Chem Biol*. 2014 Dec.

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