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ENPP2 Antibody (Center K416) Blocking Peptide

Synthetic peptide
Catalog # BP2854c

Specification

ENPP2 Antibody (Center K416) Blocking Peptide - Product Information

Primary Accession Q13822

ENPP2 Antibody (Center K416) Blocking Peptide - Additional Information

Gene ID 5168

Other Names
Ectonucleotide pyrophosphatase/phosphodiesterase family member 2, E-NPP 2, Autotaxin, Extracellular lysophospholipase D, LysoPLD, ENPP2, ATX, PDNP2

Target/Specificity
The synthetic peptide sequence used to generate the antibody AP2854c was selected from the Center region of human ENPP2. A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

Format
Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions
This product is for research use only. Not for use in diagnostic or therapeutic procedures.

ENPP2 Antibody (Center K416) Blocking Peptide - Protein Information

Name ENPP2

Function
Hydrolyzes lysophospholipids to produce the signaling molecule lysophosphatidic acid (LPA) in extracellular fluids (PubMed:15769751, PubMed:26371182, PubMed:27754931, PubMed:14500380, PubMed:12354767). Major substrate is lysophosphatidylcholine (PubMed:12176993, PubMed:27754931, PubMed:14500380). Can also act on sphingosylphosphorylcholine producing sphingosine-1-phosphate, a modulator of cell motility

(PubMed:14500380). Can hydrolyze, in vitro, bis-pNPP, to some extent pNP-TMP, and barely ATP (PubMed:15769751, PubMed:12176993). Involved in several motility-related processes such as angiogenesis and neurite outgrowth. Acts as an angiogenic factor by stimulating migration of smooth muscle cells and microtubule formation (PubMed:11559573). Stimulates migration of melanoma cells, probably via a pertussis toxin-sensitive G protein (PubMed:1733949). May have a role in induction of parturition (PubMed:12176993). Possible involvement in cell proliferation and adipose tissue development (Probable). Tumor cell motility-stimulating factor (PubMed:1733949, PubMed:11559573). Required for LPA production in activated platelets, cleaves the sn-1 lysophospholipids to generate sn-1 lysophosphatidic acids containing predominantly 18:2 and 20:4 fatty acids (PubMed:21393252). Shows a preference for the sn-1 to the sn-2 isomer of 1-O-alkyl-sn-glycero-3- phosphocholine (lyso-PAF) (PubMed:21393252).

Cellular Location
Secreted

Tissue Location
Detected in blood plasma (at protein level) (PubMed:12176993, PubMed:26371182). Predominantly expressed in brain, placenta, ovary, and small intestine. Expressed in a number of carcinomas such as hepatocellular and prostate carcinoma, neuroblastoma and non-small-cell lung cancer. Expressed in body fluids such as plasma, cerebral spinal fluid (CSF), saliva, follicular and amniotic fluids. Not detected in leukocytes. Isoform 1 is more highly expressed in peripheral tissues than in the central nervous system (CNS) Adipocytes only express isoform 1. Isoform 3 is more highly expressed in the brain than in peripheral tissues.

ENPP2 Antibody (Center K416) Blocking Peptide - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Blocking Peptides

ENPP2 Antibody (Center K416) Blocking Peptide - Images

ENPP2 Antibody (Center K416) Blocking Peptide - Background

ENPP2 functions as both a phosphodiesterase, which cleaves phosphodiester bonds at the 5' end of oligonucleotides, and a phospholipase, which catalyzes production of lysophosphatidic acid (LPA) in extracellular fluids. LPA evokes growth factor-like responses including stimulation of cell proliferation and chemotaxis. This protein stimulates the motility of tumor cells and has angiogenic properties, and its expression is upregulated in several kinds of carcinomas. This protein is secreted and further processed to make the biologically active form.

ENPP2 Antibody (Center K416) Blocking Peptide - References

Kawagoe H., Soma O., Goji J., Nishimura N., Narita M.,Genomics 30:380-384(1995)Nam S.W., Clair T., Kim Y.S., McMarlin A.,Cancer Res. 61:6938-6944(2001)The MGC Project Team Genome Res. 14:2121-2127(2004)