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ENPP2 Antibody (Center K416)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP2854C

Product Information

Application	WB, IHC-P, FC, E
Primary Accession	Q13822
Other Accession	A1A4K5
Reactivity	Human, Mouse, Rat
Predicted	Bovine, Canine, Rabbit, Chicken
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	98994
Antigen Region	401-430

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	This ENPP2 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 401-430 amino acids from the Central region of human ENPP2.
Dilution	WB~~1:1000 IHC-P~~1:100~500 FC~~1:10~50 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	ENPP2 Antibody (Center K416) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	ENPP2 (HGNC:3357)
Function	Secreted lysophospholipase D that hydrolyzes lysophospholipids to produce the signaling molecule lysophosphatidic acid (LPA) in extracellular fluids

(PubMed:12354767, PubMed:14500380, PubMed:15769751, PubMed:26371182, PubMed:27754931). Its major substrate is lysophosphatidylcholine (PubMed:12176993, PubMed:14500380, PubMed:27754931). 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:12176993, PubMed:15769751). 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). 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.

Background

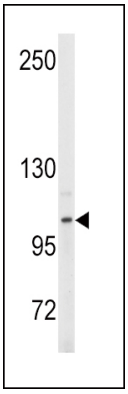
ENPP2 functions as both a phosphodiesterase, which cleaves phosphodiester bonds at the 5' end of oligonucleotides, and a phospholipase, which catalyzes production of lysophosphatidic acid (LPA) in extracellular fluids. LPA evokes growth factor-like responses including stimulation of cell proliferation 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.

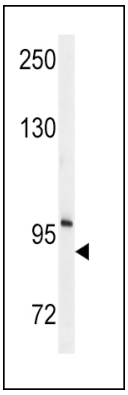
References

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)

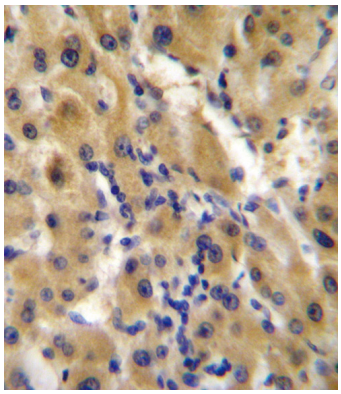
Images

Western blot analysis of anti-ENPP2 Antibody (Center K416) (Cat.#AP2854c) in Y79 cell line lysates (35ug/lane).ENPP2(arrow) was detected using the purified Pab.

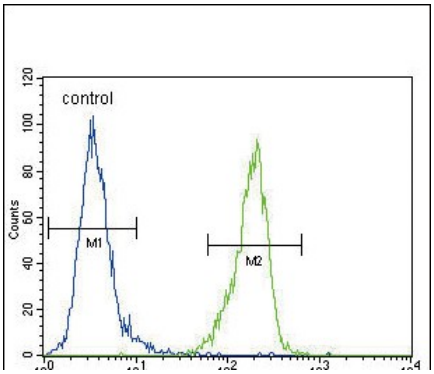




Western blot analysis of anti-ENPP2 Antibody (Center K416) (Cat.#AP2854c) in mouse cerebellum tissue lysates (35ug/lane).ENPP2(arrow) was detected using the purified Pab.



ENPP2 Antibody (Center K416) (Cat. #AP2854C)immunohistochemistry analysis in formalin fixed and paraffin embedded human hepatocarcinoma followed by peroxidase conjugation of the secondary antibody and DAB staining.This data demonstrates the use of ENPP2 Antibody (Center K416) for immunohistochemistry. Clinical relevance has not been evaluated.



ENPP2 Antibody (Center K416) (Cat. #AP2854c) flow cytometric analysis of MDA-MB435 cells (right histogram) compared to a negative control cell (left histogram).FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.

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