

PRODUCT INFORMATION



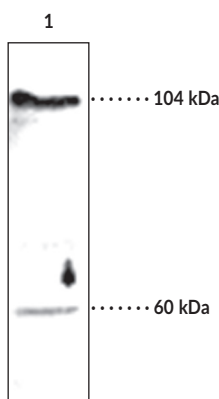
Autotaxin Polyclonal Antibody

Item No. 10005375

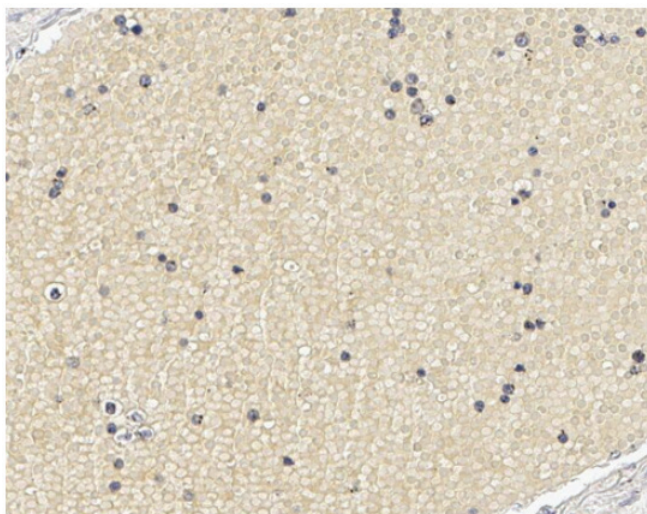
Overview and Properties

Contents:	This vial contains 500 µl of peptide affinity-purified polyclonal antibody.
Synonyms:	ENPP2, Lysophospholipase D, Lyso-PLD
Immunogen:	Peptide from the C-terminal region of rat LysoPLD
Species Reactivity:	(+) Human, mouse, and rat; other species not tested
Form:	Liquid
Storage:	-20°C (as supplied)
Stability:	≥3 years
Storage Buffer:	PBS, pH 7.2, with 50% glycerol and 0.02% sodium azide
Host:	Rabbit
Applications:	Immunocytochemistry (ICC), Immunohistochemistry (IHC), and Western blot (WB); the recommended starting dilution for ICC is 1:500, 1:80 for IHC, and 1:200 for WB. Other applications were not tested, therefore optimal working concentration/dilution should be determined empirically.

Images



Lane 1: Human cerebella supernatant (40 µg)



Immunohistochemistry analysis of formalin-fixed, paraffin-embedded (FFPE) human cerebellum tissue after heat-induced antigen retrieval in pH 6.0 citrate buffer. After incubation with Autotaxin Polyclonal Antibody (Item No. 10005375) at a dilution of 1:80, slides were incubated with biotinylated secondary antibody, followed by alkaline phosphatase-streptavidin and chromogen (DAB).

WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY
Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

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CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA

PHONE: [800] 364-9897
[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM

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Description

Lysophosphatidic acid (LPA) is an extracellular signaling lipid that evokes multiple biological functions including induction of platelet aggregation, smooth muscle contraction, and stimulation of cell proliferation and chemotaxis.¹ Lysophospholipase D (lysoPLD) was first discovered in 1999 as the enzyme responsible for generating LPA from lysophosphatidylcholine (LPC).² It was later revealed to be identical to an autocrine motility factor, autotaxin (ATX), which plays a role in tumor progression and metastasis.^{3,4} LysoPLD/ATX mRNA is widely expressed with highest levels found in brain, ovary, lung, intestine, and testis.^{5,6} Rat lysoPLD is composed of 885 amino acids with an estimated molecular weight of 101 kDa. The protein is reported to be heavily glycosylated and thus its apparent size on SDS-PAGE may be run as high as 125 kDa.⁷ Useful positive controls include cerebrospinal fluid, mouse ascites, or seminal plasma.

References

1. Ishii, I., Fukushima, N., Ye, X., *et al.* Lysophospholipid receptors: Signaling and biology. *Annu. Rev. Biochem.* **73**, 321-354 (2004).
2. Tokumura, A., Majima, E., Kariya, Y., *et al.* Identification of human lysophospholipase D, a lysophosphatidic acid-producing enzyme, as autotaxin, a multifunctional phosphodiesterase. *J. Biol. Chem.* **277**(42), 39436-39442 (2002).
3. Umezū-Goto, M., Kishi, Y., Taira, A., *et al.* Autotaxin has lysophospholipase D activity leading to tumor cell growth and motility by lysophosphatidic acid production. *J. Cell Biol.* **158**(2), 227-233 (2005).
4. Nam, S.W., Clair, T., Campo, C.K., *et al.* Autotaxin (ATX), a potent tumor motogen, augments invasive and metastatic potential of ras-transformed cells. *Oncogene* **19**(2), 241-247 (2000).
5. Sun, Y.-X., Tsubio, K., Okamoto, Y., *et al.* Biosynthesis of anandamide and N-palmitoylethanolamide by sequential actions of phospholipase A₂ and lysophospholipase D. *J. Biochem.* **380**(Pt. 3), 749-755 (2004).
6. van Leeuwen, F.N., Giepmans, B.N.G., van Meeteren, L.A., *et al.* Lysophosphatidic acid: Mitogen and motility factor. *Biochem. Soc.* **31**(Pt. 6), 1209-1212 (2003).
7. Murata, J., Lee, H.Y., Clair, T., *et al.* cDNA cloning of the human tumor motility-stimulating protein, autotaxin, reveals a homology with phosphodiesterases. *J. Biol. Chem.* **269**(48), 30479-30484 (1994).

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