

PRODUCT INFORMATION



LPA₁ Polyclonal Antibody Item No. 10005280

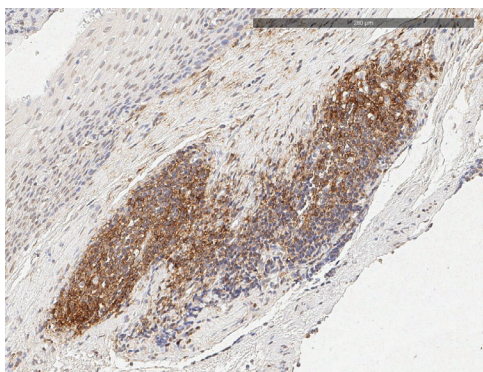
Overview and Properties

Contents:	This vial contains 500 µl of peptide affinity-purified polyclonal antibody.
Synonyms:	EDG-2, LPA Receptor 1, Lysophosphatidic Acid Receptor 1
Immunogen:	Synthetic peptide from the C-terminal cytoplasmic region of human protein LPA ₁
Species Reactivity:	(+) Human, mouse, and rat; other species not tested
Uniprot No.:	Q92633
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), Immunofluorescence (IF), Immunohistochemistry (IHC), and Western blot (WB); the recommended starting concentration for ICC is 1:60 and 1:200 for IF, IHC, and WB. Other applications were not tested, therefore optimal working concentration/dilution should be determined empirically.

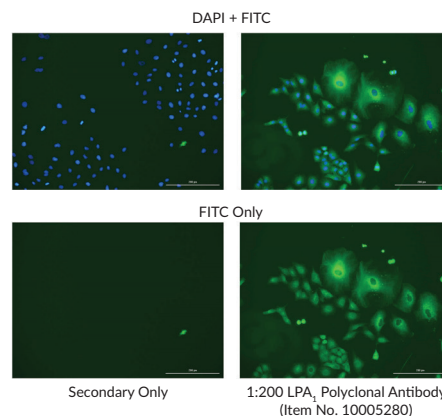
Images



Lane 1: Murine liver, solubilized 100,000 x g pellet (50 µg)
Lane 2: A549 cell lysate (40 µg)
Lane 3: Rat liver lysate (40 µg)



Human kidney tissue was probed with the LPA₁ Polyclonal Antibody at a 1:60 dilution.



Immunofluorescence analysis of paraformaldehyde-fixed A549 cells. After incubation with LPA₁ Polyclonal Antibody (Item No. 10005280) at a 1:200 dilution (or negative control), cells were incubated with FITC-labeled anti-rabbit IgG (Item No. 10006588), followed by DAPI nuclear stain. Images show FITC alone or both fluorescence channels to highlight nuclear staining (where applicable).

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
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Description

LPA₁ (also known as EDG-2) is one of four known lysophosphatidic acid (LPA) receptors (LPA₁₋₄).¹ LPA₁₋₃ are part a family of G protein-coupled receptors that share identity to the sphingosine-1-phosphate receptors (S1P₁₋₅).² LPA₁ couples with three types of G proteins, G_{i/o}, G_q, and G_{12/13} to induce a range of cellular responses including activation of phospholipase C, multiple kinases, the serum response element and cell proliferation.^{3,4} LPA₁ mRNA is detected a wide range of tissues and cells including brain, heart, small intestine, spleen, testis, kidney, HeLa cells, and A549 cells.^{5,6} Mouse and human LPA₁ have 364 amino acids with an estimated molecular weight of 41 kDa.⁴ Cayman's LPA₁ polyclonal antibody detects the protein from several species from 43-50 kDa, suggesting heterogeneous LPA₁ post-translational modifications in distinct cells.

References

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2. Chun, J., Goetzl, E.J., Hla, T., *et al.* International union of pharmacology. XXXIV. Lysophospholipid receptor nomenclature. *Pharmacol. Rev.* **54**, 265-269 (2002).
3. Fukushima, N. and Chun, J. The LPA receptors. *Prostaglandins and Other Lipid Mediators* **64**, 21-32 (2001).
4. Ishii, I., Fukushima, N., Ye, X., *et al.* Lysophospholipid receptors: Signaling and biology. *Annu. Rev. Biochem.* **73**, 321-354 (2004).
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6. An, S., Bleu, T., Hallmark, O.G., *et al.* Characterization of a novel subtype of human G protein-coupled receptor for lysophosphatidic acid. *J. Biol. Chem.* **273**(14), 7906-7910 (1998).

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