

Product Information



LPA₃ Blocking Peptide

Catalog No. 10005092

Lysophosphatidic acid receptor 3 (LPA₃; also known as edg-7) is one of three LPA receptors (LPA₁, LPA₂, and LPA₃) that are members of large family of GPCRs that also include those for sphingosine-1-phosphate (SIP₁₋₅).¹ The LPA receptors mediate many cellular responses including cytoskeletal rearrangements, cell proliferation, and inhibition of gap junction communication.^{2,3} Murine and human LPA₃ has 353 amino acids with an estimated molecular weight of 40 kDa.^{4,5} The mRNA level of LPA₃ is high in testes, kidney, and lung but low in intestine, heart, thymus, and stomach.⁵ Cayman's LPA₃ polyclonal antibody detects a protein at around 40 kDa in human HepG2 cells, murine macrophages, and in murine and rat liver.

Laboratory Procedures

This vial contains 200 µg peptide in 200 µl TBS, pH 7.4, containing 0.1% BSA and 0.02% sodium azide. The LPA₃ Blocking Peptide (Murine LPA₃ amino acids 1-12) can be used in conjunction with Cayman's LPA₃ Polyclonal Antibody (Catalog No. 10004840) to block protein-antibody complex formation during immunochemical analysis of LPA₃.

Reconstitute the lyophilized peptide with 200 µl of PBS or distilled water. Store this peptide solution at -20°C. It will be stable for at least two years. To block antibody/protein complex formation, the following procedure is recommended:

1. Mix the LPA₃ Polyclonal Antibody (Catalog No. 10004840) and blocking peptide together in a 1:1 (v/v) ratio in a microfuge tube. For example, mix 20 µl of antibody and 20 µl of peptide.*
2. Incubate for 1 hour at room temperature with occasional mixing prior to further dilution and application of the mixture to the immunoblot.
3. Dilute the mixture to the final working antibody concentration and apply to the slide or membrane as usual.

*This is a recommended mixture. The minimum amount of peptide needed for complete blocking has not been precisely determined and may vary depending on the sample being analyzed. The amount of peptide required may need to be increased if sufficient blocking does not occur.

References

1. Chun, J., Goetzl, E.J., Hla, T., *et al.* International union of pharmacology. XXXIV. Lysophospholipid receptor nomenclature. *Pharmacol. Rev.* **54**, 265-269 (2002).
2. Fukushima, N. and Chun, J. The LPA receptors. *Prostaglandins and Other Lipid Mediators* **64**, 21-32 (2001).
3. Contos, J.J.A., Ishii, I., and Chun, J. Lysophosphatidic Acid Receptors. *Mol. Pharmacol.* **58**, 1188-1196 (2000).
4. Bandoh, K., Aoki, J., Hosono, H., *et al.* Molecular cloning and characteristics of a novel human G-protein-coupled receptor, EDG7, for lysophosphatidic acid. *J. Biol. Chem.* **274**(39), 27776-27785 (1999).
5. Contos, J.J.A. and Chun, J. The mouse lpA₃/Edg7 lysophosphatidic acid receptor gene: genomic structure, chromosomal localization, and expression pattern. *Gene* **267**, 243-253 (2001).

Related Product

LPA₃ Polyclonal Antibody - Cat. No. 10004840

WARNING: THIS PRODUCT IS NOT INTENDED OR APPROVED FOR HUMAN OR VETERINARY USE. USE OF THIS PRODUCT FOR HUMAN OR ANIMAL TESTING IS EXTREMELY HAZARDOUS AND MAY RESULT IN DISEASE, SEVERE INJURY, OR DEATH.

MATERIAL SAFETY DATA

This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, but not all, of the information required for the safe and proper use of this material. Before use, the user must review the complete Material Safety Data Sheet, which has been sent under separate cover to the MSDS supervisor at your institution.

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