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LPAR1 / LPA1 / EDG2 Antibody (aa5-54)

Rabbit Polyclonal Antibody
Catalog # ALS14214

Specification

LPAR1 / LPA1 / EDG2 Antibody (aa5-54) - Product Information

Application	**IF, WB**
Primary Accession	Q92633
Reactivity	**Human, Rat**
Host	**Rabbit**
Clonality	**Polyclonal**
Calculated MW	**41kDa KDa**

LPAR1 / LPA1 / EDG2 Antibody (aa5-54) - Additional Information

Gene ID 1902

Other Names
Lysophosphatidic acid receptor 1, LPA receptor 1, LPA-1, Lysophosphatidic acid receptor Edg-2, LPAR1, EDG2, LPA1

Target/Specificity
LPAR1/EDG2 Antibody detects endogenous levels of total LPAR1/EDG2 protein.

Reconstitution & Storage
Short term 4°C, long term aliquot and store at -20°C, avoid freeze thaw cycles.

Precautions
LPAR1 / LPA1 / EDG2 Antibody (aa5-54) is for research use only and not for use in diagnostic or therapeutic procedures.

LPAR1 / LPA1 / EDG2 Antibody (aa5-54) - Protein Information

Name LPAR1

Synonyms EDG2, LPA1

Function
Receptor for lysophosphatidic acid (LPA) (PubMed:19306925, PubMed:25025571, PubMed:26091040, PubMed:9070858). Plays a role in the reorganization of the actin cytoskeleton, cell migration, differentiation and proliferation, and thereby contributes to the responses to tissue damage and infectious agents. Activates downstream signaling cascades via the G(i)/G(o), G(12)/G(13), and G(q) families of heteromeric G proteins. Signaling inhibits adenylyl cyclase activity and decreases cellular cAMP levels (PubMed:26091040).

Signaling triggers an increase of cytoplasmic Ca(2+) levels (PubMed:19656035, PubMed:19733258, PubMed:26091040). Activates RALA; this leads to the activation of phospholipase C (PLC) and the formation of inositol 1,4,5-trisphosphate (PubMed:19306925). Signaling mediates activation of down-stream MAP kinases (By similarity). Contributes to the regulation of cell shape. Promotes Rho-dependent reorganization of the actin cytoskeleton in neuronal cells and neurite retraction (PubMed:26091040). Promotes the activation of Rho and the formation of actin stress fibers (PubMed:26091040). Promotes formation of lamellipodia at the leading edge of migrating cells via activation of RAC1 (By similarity). Through its function as LPA receptor, plays a role in chemotaxis and cell migration, including responses to injury and wounding (PubMed:18066075, PubMed:19656035, PubMed:19733258). Plays a role in triggering inflammation in response to bacterial lipopolysaccharide (LPS) via its interaction with CD14. Promotes cell proliferation in response to LPA (By similarity). Inhibits the intracellular ciliogenesis pathway in response to LPA and through AKT1 activation (PubMed:31204173). Required for normal skeleton development. May play a role in osteoblast differentiation. Required for normal brain development. Required for normal proliferation, survival and maturation of newly formed neurons in the adult dentate gyrus. Plays a role in pain perception and in the initiation of neuropathic pain (By similarity).

Cellular Location
Cell surface. Cell membrane; Multi-pass membrane protein. Endosome Note=Prior to LPA treatment found predominantly at the cell surface Internalized after LPA treatment. Colocalizes with RALA in endocytic vesicles after LPA treatment.

Tissue Location
Expressed in many adult organs, including brain, heart, colon, small intestine, placenta, prostate, ovary, pancreas, testes, spleen, skeletal muscle, and kidney. Little or no expression in liver, lung, thymus, or peripheral blood leukocytes (PubMed:9070858) Detected in lung fibroblasts from bronchoalveolar fluid from patients with idiopathic pulmonary fibrosis (PubMed:18066075). Detected in bone marrow-derived mesenchymal stem cells (PubMed:19733258)

Volume
50 µl

LPAR1 / LPA1 / EDG2 Antibody (aa5-54) - Protocols

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

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

LPAR1 / LPA1 / EDG2 Antibody (aa5-54) - Images

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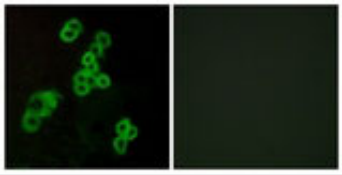
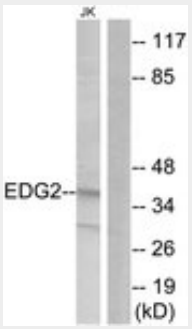


Immunofluorescence of MCF7 cells, using LPAR1/EDG2 Antibody.



Western blot of extracts from Jurkat cells, using LPAR1/EDG2 Antibody.

LPAR1 / LPA1 / EDG2 Antibody (aa5-54) - Background

Receptor for lysophosphatidic acid (LPA), a mediator of diverse cellular activities. Seems to be coupled to the G(i)/G(o), G(12)/G(13), and G(q) families of heteromeric G proteins. Stimulates phospholipase C (PLC) activity in a manner that is dependent on RALA activation.

LPAR1 / LPA1 / EDG2 Antibody (aa5-54) - References

An S.,et al.Biochem. Biophys. Res. Commun. 231:619-622(1997).
Moolenaar W.H.,et al.Curr. Opin. Cell Biol. 9:168-173(1997).
Kopatz S.A.,et al.Submitted (JUN-2003) to the EMBL/GenBank/DDBJ databases.
Ota T.,et al.Nat. Genet. 36:40-45(2004).
Humphray S.J.,et al.Nature 429:369-374(2004).