



LPAR1 Antibody

Product Code	CSB-RA922556A0HU
Storage	Upon receipt, store at -20°C or -80°C. Avoid repeated freeze.
Uniprot No.	Q92633
Immunogen	A synthesized peptide derived from human EDG2
Species Reactivity	Human
Tested Applications	ELISA, WB; Recommended dilution: WB:1:500-1:5000
Relevance	<p>Receptor for lysophosphatidic acid (LPA) (PubMed:9070858, PubMed:19306925, PubMed:25025571, PubMed:26091040). 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 lysophosphatidic acid 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 lysophosphatidic acid. 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).</p>
Form	Liquid
Conjugate	Non-conjugated
Storage Buffer	Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Purification Method	Affinity-chromatography
Isotype	Rabbit IgG
Clonality	Monoclonal
Product Type	Recombinant Antibody



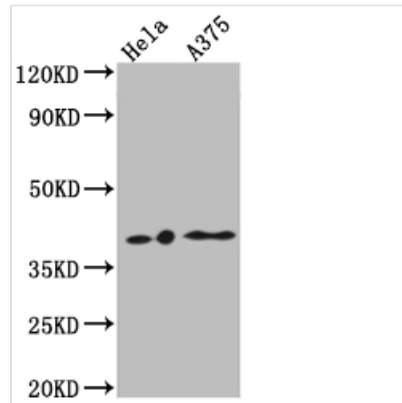
Immunogen Species Homo sapiens (Human)

Research Area Cancer; Cardiovascular; Metabolism; Signal transduction

Gene Names LPAR1

Accession NO. 4C3

Image



Western Blot

Positive WB detected in: HeLa whole cell lysate, A375 whole cell lysate

All lanes: EDG2 antibody at 1:1000

Secondary

Goat polyclonal to rabbit IgG at 1/50000 dilution

Predicted band size: 42, 42 kDa

Observed band size: 42 kDa

Description

LPAR1, also called Edg2, primarily expressed in the brain, can couple to G protein-coupled receptors (GPCRs) and participate in regulating cell proliferation and survival, migration, cell-cell contact, cytoskeletal alterations, calcium mobilization, adenylyl acylase inhibition, and apoptosis after being stimulated by LPA. LPAR1 deletion causes neurodevelopmental disorders and CNS diseases, such as brain cancer, neuropsychiatric disorders, demyelination diseases, and neuropathic pain. LPAR1 might play a vital role in various benign and malignant diseases by activating the PI3K/AKT pathway.

The production of this recombinant LPAR1 antibody started with immunization. And then the workflow included B cell harvest and enrichment; import single B cell; assays to identify the specificity, affinity & functionality of the cell; export the single B cell; cDNA synthesis and sequencing; express the LPAR1 antibody in mammalian cells. The target LPAR1 antibody was validated in ELISA, WB.