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EDG-2 Polyclonal Antibody

Catalog # AP69644

Product Information

Application	WB, IHC-P, IF, ICC, E
Primary Accession	Q92633
Reactivity	Human, Rat
Host	Rabbit
Clonality	Polyclonal
Calculated MW	41109

Additional Information

Gene ID	1902
Other Names	LPAR1; EDG2; LPA1; Lysophosphatidic acid receptor 1; LPA receptor 1; LPA-1; Lysophosphatidic acid receptor Edg-2
Dilution	WB~~Western Blot: 1/500 - 1/2000. Immunohistochemistry: 1/100 - 1/300. Immunofluorescence: 1/200 - 1/1000. ELISA: 1/5000. Not yet tested in other applications. IHC-P~~N/A IF~~1:50~200 ICC~~N/A E~~N/A
Format	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.09% (W/V) sodium azide.
Storage Conditions	-20℃

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).

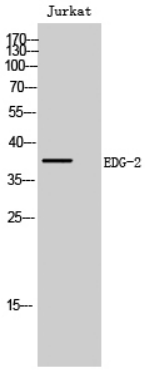
	Promotes the activation of Rho and the formation of actin stress fibers (PubMed:26091040). Promotes formation of lamellipodia at the leading edge of migrating cells via activation of RAC1 (By similarity). Through its function as LPA receptor, plays a role in chemotaxis and cell migration, including responses 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)

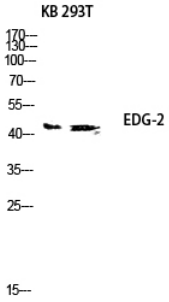
Background

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).

Images

Western Blot analysis of Jurkat cells using EDG-2 Polyclonal Antibody diluted at 1：500





Western blot analysis of KB 293T lysis using EDG-2 antibody. Antibody was diluted at 1:500

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