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# LPA1 Rabbit pAb

Catalog # AP98821

## Product Information

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| **Application** | IHC-P, IHC-F, IF |
| **Primary Accession** | Q92633 |
| **Other Accession** | Q92633 |
| **Reactivity** | Human, Mouse |
| **Predicted** | Rat, Pig, Rabbit, Dog, Sheep |
| **Host** | Rabbit |
| **Clonality** | Polyclonal |
| **Calculated MW** | 41109 |
| **Physical State** | Liquid |
| **Immunogen** | KLH conjugated synthetic peptide derived from human LPA1 |
| **Epitope Specificity** | 1-50/364 |
| **Isotype** | IgG |
| **Purity** | affinity purified by Protein A |
| **Buffer** | 0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol. |
| **SIMILARITY** | Belongs to the G-protein coupled receptor 1 family. |
| **SUBUNIT** | Interacts with RALA and ADRBK1. |
| **Important Note** | This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications. |
| **Background Descriptions** | EDG2 belongs to a family of G-protein coupled receptors whose ligands are lysophospholipids. There are eight known members of the EDG receptor family and they are implicated in mediating growth-related effects such as induction of cellular proliferation, alterations in differentiation and survival, and suppression of apoptosis. They also evoke cellular effector functions that are dependent on cytoskeletal responses such as contraction, secretion, adhesion and chemotaxis. EDG receptors are developmentally regulated and differ in tissue distribution. They couple to multiple types of G proteins to signal through ras and MAP kinase, rho, phospholipase C, and several proteins not used within 12 hours. Edg2 has been reported in most human tissues, and is especially abundant in brain cortical regions. ESTs have been isolated from bone, brain, breast, connective tissue, embryo, heart/melanocyte/uterus, lung, prostate and uterus libraries. |

## Additional Information

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| **Gene ID** | 1902 |
| **Other Names** | EDG2; Gpcr26; LPA1; Mrec1.3; VZG1; edg-2; rec.1.3; vzg-1; Kdt2; LPAR1_BOVIN; LPAR1; LPA receptor 1; LPA-1; Lysophosphatidic acid receptor Edg-2; Rec1.3; LPAR1_HUMAN; LPAR1_MOUSE; LPAR1_RAT; Gpcr91; LPAR1_SHEEP; lysophosphatidic acid receptor 1; endothelial differentiation, lysophosphatidic acid G-protein-coupled receptor, 2 |
| | IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500 |

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| **Dilution** | |
| **Storage** | Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C. |

## Protein Information

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| **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) |

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.