

**EDG2 Antibody (N-term) Blocking Peptide**  
**Synthetic peptide**  
**Catalog # BP6138a****Specification**

---

**EDG2 Antibody (N-term) Blocking Peptide - Product Information**

Primary Accession [O92633](#)  
Other Accession [NP\\_001392](#)

**EDG2 Antibody (N-term) Blocking Peptide - 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**

The synthetic peptide sequence used to generate the antibody [AP6138a](/product/products/AP6138a) was selected from the N-term region of human EDG2. A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

**Format**

Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

**Storage**

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

**Precautions**

This product is for research use only. Not for use in diagnostic or therapeutic procedures.

**EDG2 Antibody (N-term) Blocking Peptide - Protein Information**

**Name** LPAR1

**Synonyms** EDG2, LPA1

**Function**

Receptor for lysophosphatidic acid (LPA) (PubMed:[9070858](http://www.uniprot.org/citations/9070858), PubMed:[19306925](http://www.uniprot.org/citations/19306925), PubMed:[25025571](http://www.uniprot.org/citations/25025571), PubMed:[26091040](http://www.uniprot.org/citations/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:<a href="http://www.uniprot.org/citations/26091040" target="\_blank">26091040</a>). Signaling triggers an increase of cytoplasmic Ca(2+) levels (PubMed:<a href="http://www.uniprot.org/citations/19656035" target="\_blank">19656035</a>, PubMed:<a href="http://www.uniprot.org/citations/19733258" target="\_blank">19733258</a>, PubMed:<a href="http://www.uniprot.org/citations/26091040" target="\_blank">26091040</a>). Activates RALA; this leads to the activation of phospholipase C (PLC) and the formation of inositol 1,4,5-trisphosphate (PubMed:<a href="http://www.uniprot.org/citations/19306925" target="\_blank">19306925</a>). 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:<a href="http://www.uniprot.org/citations/26091040" target="\_blank">26091040</a>). Promotes the activation of Rho and the formation of actin stress fibers (PubMed:<a href="http://www.uniprot.org/citations/26091040" target="\_blank">26091040</a>). 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:<a href="http://www.uniprot.org/citations/18066075" target="\_blank">18066075</a>, PubMed:<a href="http://www.uniprot.org/citations/19656035" target="\_blank">19656035</a>, PubMed:<a href="http://www.uniprot.org/citations/19733258" target="\_blank">19733258</a>). 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:<a href="http://www.uniprot.org/citations/31204173" target="\_blank">31204173</a>). 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)

## **EDG2 Antibody (N-term) Blocking Peptide - Protocols**

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

- [Blocking Peptides](#)

## **EDG2 Antibody (N-term) Blocking Peptide - Images**

## **EDG2 Antibody (N-term) Blocking Peptide - Background**

The EDG2 integral membrane protein is a lysophosphatidic acid (LPA) receptor from a group known as EDG receptors. These receptors are members of the G protein-coupled receptor superfamily. Utilized by LPA for cell signaling, EDG receptors mediate diverse biologic functions, including proliferation, platelet aggregation, smooth muscle contraction, inhibition of neuroblastoma cell differentiation, chemotaxis, and tumor cell invasion.

**EDG2 Antibody (N-term) Blocking Peptide - References**

Matsuda, A., et al., *Oncogene* 22(21):3307-3318 (2003). Van Leeuwen, F.N., et al., *J. Biol. Chem.* 278(1):400-406 (2003). Shida, D., et al., *Cancer Res.* 63(7):1706-1711 (2003). Cervera, P., et al., *Glia* 38(2):126-136 (2002). An, S., et al., *Mol. Pharmacol.* 54(5):881-888 (1998).