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EDG4 Antibody (N-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP6140a

Product Information

Application	WB, IHC-P, E
Primary Accession	Q9HBW0
Other Accession	Q95KH4
Reactivity	Human, Mouse
Predicted	Monkey
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	38741
Antigen Region	3-32

Additional Information

Gene ID	9170
Other Names	Lysophosphatidic acid receptor 2, LPA receptor 2, LPA-2, Lysophosphatidic acid receptor Edg-4, LPAR2, EDG4, LPA2
Target/Specificity	This EDG4 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 3-32 amino acids from the N-terminal region of human EDG4.
Dilution	WB~~1:1000 IHC-P~~1:100~500 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	EDG4 Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	LPAR2 (HGNC:3168)
Synonyms	EDG4, LPA2
Function	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. Plays a key role in phospholipase C-beta (PLC-beta) signaling pathway. Stimulates phospholipase C (PLC) activity in a manner that is independent of RALA activation.
Cellular Location	Cell surface. Cell membrane; Multi-pass membrane protein. Note=Prior to LPA treatment found predominantly at the cell surface but in the presence of LPA colocalizes with RALA in the endocytic vesicles
Tissue Location	Expressed most abundantly in testes and peripheral blood leukocytes with less expression in pancreas, spleen, thymus and prostate. Little or no expression in heart, brain, placenta, lung, liver, skeletal muscle, kidney, ovary, small intestine, or colon

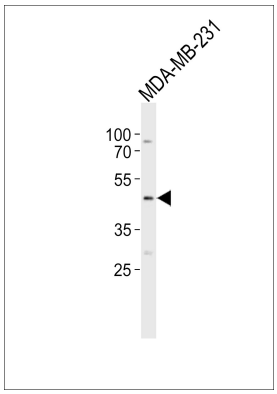
Background

EDG4 is a member of family I of the G protein-coupled receptors, as well as the EDG family of proteins. This protein functions as a lysophosphatidic acid (LPA) receptor and contributes to Ca2+ mobilization, a critical cellular response to LPA in cells, through association with Gi and Gq proteins.

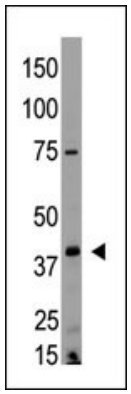
References

Hu, Y.L., et al., J. Natl. Cancer Inst. 95(10):733-740 (2003).
Fujita, T., et al., Cancer Lett. 192(2):161-169 (2003).
Contos, J.J., et al., Genomics 64(2):155-169 (2000).
Zheng, Y., et al., FASEB J. 14(15):2387-2389 (2000).
Young, K.W., et al., J. Biol. Chem. 275(49):38532-38539 (2000).

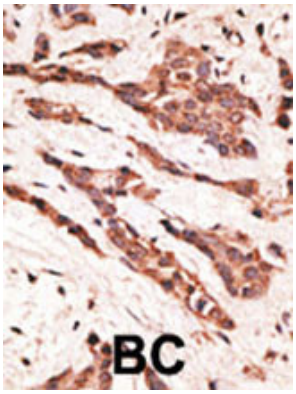
Images



Western blot analysis of lysate from MDA-MB-231 cell line, using EDG4 Antibody (N18)(Cat. #AP6140a). AP6140a was diluted at 1:1000. A goat anti-rabbit IgG H&L(HRP) at 1:10000 dilution was used as the secondary antibody. Lysate at 35ug.



The anti-EDG4 N-term Antibody (Cat.#AP6140a) is used in Western blot to detect EDG4 in HL60 lysate.



Formalin-fixed and paraffin-embedded human cancer tissue reacted with the primary antibody, which was peroxidase-conjugated to the secondary antibody, followed by AEC staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated. BC = breast carcinoma; HC = hepatocarcinoma.

Citations

- Evaluation of pancreatic cancer cell migration with multiple parameters in vitro by using an optical real-time cell mobility assay device.
- Lysophosphatidic acid increases proximal tubule cell secretion of profibrotic cytokines PDGF-B and CTGF through LPA2- and G □±q-mediated Rho and □±v □?6 integrin-dependent activation of TGF- □?.
- Lysophosphatidic acid receptor activation affects the C13NJ microglia cell line proteome leading to alterations in glycolysis, motility, and cytoskeletal architecture.
- Lysophosphatidic acid induces Ca2+ mobilization and c-Myc expression in mouse embryonic stem cells via the phospholipase C pathway.
- Nm23-H1 suppresses tumor cell motility by down-regulating the lysophosphatidic acid receptor EDG2.