

EDG-5 (C-16): sc-16085

BACKGROUND

The EDG (endothelial differentiation gene) family of G protein coupled receptors consists of eight family members that bind lysophospholipid (LPL) mediators, including sphingosine-1-phosphate (SPP) and lysophosphatidic acid (LPA). EDG-1, EDG-3, EDG-5 (also designated H218 and AGR16) and EDG-8 bind SPP with high-affinity. EDG-6 is a low-affinity receptor for SPP. LPA preferentially binds to EDG-2, EDG-4 and EDG-7. The EDG receptors couple to multiple G proteins to signal through Ras, MAP kinase, Rho, Phospholipase C or other tyrosine kinases, which lead to cell survival, growth, migration and differentiation. EDG-1 signals through G_i proteins to activate Akt and is expressed in glioma cells. EDG-2 is expressed in brain, especially in white matter tract regions, while EDG-3 is expressed in cardiovascular tissue and in cerebellum. EDG-4 is highly expressed on leukocytes and brain, and EDG-5 has wide tissue distribution, including cardiovascular tissue and brain. Expressed in lymphoid and hematopoietic tissues and in lung, EDG-6 signals through G_{i/o} proteins, which activate growth related pathways.

REFERENCES

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- Van Brocklyn, J.R., et al. 2000. Sphingosine-1-phosphate is a ligand for the G protein-coupled receptor EDG-6. *Blood* 95: 2624-2629.
- Sato, K., et al. 2000. Differential roles of EDG-1 and EDG-5, sphingosine 1-phosphate receptors, in the signaling pathways in C6 glioma cells. *Brain Res. Mol. Brain Res.* 85: 151-160.
- Pyne, S. and Pyne, N.J. 2000. Sphingosine 1-phosphate signalling in mammalian cells. *Biochem. J.* 349: 385-402.
- Zheng, Y., et al. 2001. Lysophosphatidic acid receptor-selective effects on Jurkat T cell migration through a matrigel model basement membrane. *J. Immunol.* 166: 2317-2322.
- Morales-Ruiz, M., et al. 2001. Sphingosine-1-phosphate activates Akt, nitric oxide production and chemotaxis through a G_i-protein/phosphoinositide 3-kinase pathway in endothelial cells. *J. Biol. Chem.* 276: 19672-19677.

CHROMOSOMAL LOCATION

Genetic locus: S1PR2 (human) mapping to 19p13.2; S1pr2 (mouse) mapping to 9 A3.

SOURCE

EDG-5 (C-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of EDG-5 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-16085 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

EDG-5 (C-16) is recommended for detection of EDG-5 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

EDG-5 (C-16) is also recommended for detection of EDG-5 in additional species, including canine, bovine and porcine.

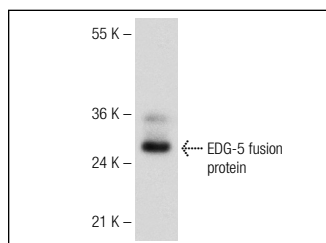
Suitable for use as control antibody for EDG-5 siRNA (h): sc-39928, EDG-5 siRNA (m): sc-39929, EDG-5 shRNA Plasmid (h): sc-39928-SH, EDG-5 shRNA Plasmid (m): sc-39929-SH, EDG-5 shRNA (h) Lentiviral Particles: sc-39928-V and EDG-5 shRNA (m) Lentiviral Particles: sc-39929-V.

Molecular Weight (predicted) of EDG-5: 39 kDa.

Molecular Weight (observed) of EDG-5: 39/48 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, CCD-1064Sk cell lysate: sc-2263 or ECV304 cell lysate: sc-2269.

DATA



EDG-5 (C-16): sc-16085. Western blot analysis of human recombinant EDG-5 fusion protein.

SELECT PRODUCT CITATIONS

- Suomalainen, L., et al. 2005. Sphingosine-1-phosphate inhibits nuclear factor κB activation and germ cell apoptosis in the human testis independently of its receptors. *Am. J. Pathol.* 166: 773-781.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

MONOS
Satisfaction
Guaranteed

Try **EDG-5 (E-12): sc-365963** or **EDG-5 (F-3): sc-365589**, our highly recommended monoclonal alternatives to EDG-5 (C-16).