

EDG-5 (H-64): sc-25491

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.

CHROMOSOMAL LOCATION

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

SOURCE

EDG-5 (H-64) is a rabbit polyclonal antibody raised against amino acids 284-347 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.

APPLICATIONS

EDG-5 (H-64) 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 (H-64) is also recommended for detection of EDG-5 in additional species, including 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, mouse heart extract: sc-2254 or rat heart extract: sc-2393.

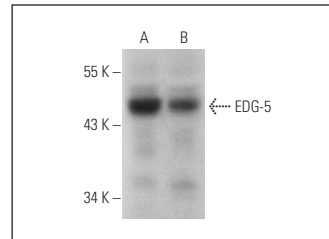
RESEARCH USE

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

STORAGE

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

DATA



EDG-5 (H-64): sc-25491. Western blot analysis of EDG-5 expression in mouse heart (A) and rat heart (B) tissue extracts.

SELECT PRODUCT CITATIONS

- Imasawa, T., et al. 2009. Unbalanced expression of sphingosine 1-phosphate receptors in diabetic nephropathy. *Exp. Toxicol. Pathol.* 62: 53-60.
- Danieli-Betto, D., et al. 2010. Sphingosine 1-phosphate signaling is involved in skeletal muscle regeneration. *Am. J. Physiol., Cell Physiol.* 298: C550-C558.
- Zhu, Q., et al. 2011. A novel lipid natriuretic factor in the renal medulla: sphingosine-1-phosphate. *Am. J. Physiol. Renal Physiol.* 301: F35-F41.
- Liu, X., et al. 2011. Essential roles of sphingosine 1-phosphate receptor types 1 and 3 in human hepatic stellate cells motility and activation. *J. Cell. Physiol.* 226: 2370-2377.
- Qu, Z., et al. 2012. Differential expression of sphingosine-1-phosphate receptors in abdominal aortic aneurysms. *Mediators Inflamm.* 2012: 643609.
- Hsu, C.K., et al. 2015. Sphingosine-1-phosphate mediates COX-2 expression and PGE₂/IL-6 secretion via c-Src-dependent AP-1 activation. *J. Cell. Physiol.* 230: 702-715.
- Rhee, S.H., et al. 2015. Pelvic organ prolapse is associated with alteration of sphingosine-1-phosphate/Rho-kinase signalling pathway in human vaginal wall. *J. Obstet. Gynaecol.* 35: 726-732.

PROTOCOLS

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