

# EDG-1 (H-60): sc-25489

## 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: S1PR1 (human) mapping to 1p21.2; S1pr1 (mouse) mapping to 3 G1.

## SOURCE

EDG-1 (H-60) is a rabbit polyclonal antibody raised against amino acids 322-381 of EDG-1 of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Available as agarose conjugate for immunoprecipitation, sc-25489 AC, 500  $\mu$ g/0.25 ml agarose in 1 ml.

## APPLICATIONS

EDG-1 (H-60) is recommended for detection of EDG-1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g 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-1 (H-60) is also recommended for detection of EDG-1 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for EDG-1 siRNA (h): sc-37086, EDG-1 siRNA (m): sc-37087, EDG-1 shRNA Plasmid (h): sc-37086-SH, EDG-1 shRNA Plasmid (m): sc-37087-SH, EDG-1 shRNA (h) Lentiviral Particles: sc-37086-V and EDG-1 shRNA (m) Lentiviral Particles: sc-37087-V.

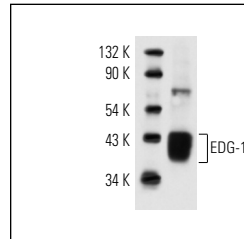
Molecular Weight of EDG-1: 38 kDa.

Positive Controls: mouse brain extract: sc-2253, rat brain extract: sc-2392 or human brain tissue extract.

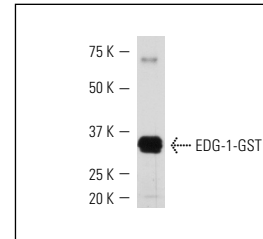
## STORAGE

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

## DATA



EDG-1 (H-60): sc-25489. Western blot analysis of EDG-1 expression in human brain tissue extract.



EDG-1 (H-60): sc-25489. Western blot analysis of GST-tagged human recombinant EDG-1.

## SELECT PRODUCT CITATIONS

- Akiyama, T., et al. 2008. Immunohistochemical detection of sphingosine-1-phosphate receptor 1 in vascular and lymphatic endothelial cells. *J. Mol. Histol.* 39: 527-533.
- Imasawa, T., et al. 2009. Unbalanced expression of sphingosine 1-phosphate receptors in diabetic nephropathy. *Exp. Toxicol. Pathol.* 62: 53-60.
- Akiyama, T., et al. 2009. Sphingosine-1-phosphate receptor 1 is a useful adjunct for distinguishing vascular neoplasms from morphological mimics. *Virchows Arch.* 454: 217-222.
- Nishimura, H., et al. 2010. Expression of sphingosine-1-phosphate receptor 1 in mantle cell lymphoma. *Mod. Pathol.* 23: 439-449.
- Müller, R., et al. 2010. Expression of sphingosine-1-phosphate receptors and lysophosphatidic acid receptors on cultured and xenografted human colon, breast, melanoma, and lung tumor cells. *Tumour Biol.* 31: 341-349.
- Yoshino, T., et al. 2011. Non-phosphorylated FTY720 induces apoptosis of human microglia by activating SREBP2. *Cell. Mol. Neurobiol.* 31: 1009-1020.
- 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.
- Santulli, P., et al. 2012. Sphingosine pathway deregulation in endometriotic tissues. *Fertil. Steril.* 97: 904-911.


 MONOS  
Satisfaction  
Guaranteed

Try **EDG-1 (A-6): sc-48356** or **EDG-1 (F-6): sc-271423**, our highly recommended monoclonal alternatives to EDG-1 (H-60). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **EDG-1 (A-6): sc-48356**.