

EDG-1 (P-20): sc-16070

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 (P-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of EDG-1 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-16070 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

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

APPLICATIONS

EDG-1 (P-20) is recommended for detection of EDG-1 of human and, to a lesser extent, mouse and rat 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-1 (P-20) 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.

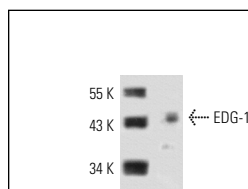
Molecular Weight of EDG-1: 38 kDa.

Positive Controls: human brain tissue extract.

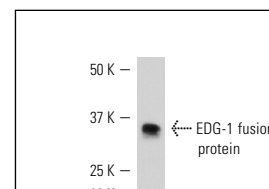
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



EDG-1 (P-20): sc-16070. Western blot analysis of EDG-1 expression in human brain tissue extract.



EDG-1 (P-20): sc-16070. Western blot analysis of human recombinant EDG-1 fusion protein.

SELECT PRODUCT CITATIONS

1. Suomalainen, L., et al. 2005. Sphingosine-1-phosphate inhibits nuclear factor κ B activation and germ cell apoptosis in the human testis independently of its receptors. *Am. J. Pathol.* 166: 773-781.
2. Skaznik-Wikiel, M.E., et al. 2006. Sphingosine-1-phosphate receptor expression and signaling correlate with uterine prostaglandin-endoperoxide synthase 2 expression and angiogenesis during early pregnancy. *Biol. Reprod.* 74: 569-576.
3. 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.

STORAGE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.



Try **EDG-1 (A-6): sc-48356** or **EDG-1 (F-6): sc-271423**, our highly recommended monoclonal alternatives to EDG-1 (P-20). Also, for AC, HRP, FITC, PE, Alexa Fluor[®] 488 and Alexa Fluor[®] 647 conjugates, see **EDG-1 (A-6): sc-48356**.