SANTA CRUZ BIOTECHNOLOGY, INC.

EDG-7 (C-7): sc-390270

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

0BACKGROUND

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

1. Goetzl, E.J. and An, S. 1999. A subfamily of G protein-coupled cellular receptors for lysophospholipids and lysosphingolipids. Adv. Exp. Med. Biol. 469: 259-264.
2. 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.
3. 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.
4. Pyne, S. and Pyne, N.J. 2000. Sphingosine 1-phosphate signalling in mammalian cells. Biochem. J. 349: 385-402.
5. 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.

CHROMOSOMAL LOCATION

Genetic locus: LPAR3 (human) mapping to 1p22.3.

SOURCE

EDG-7 (C-7) is a mouse monoclonal antibody raised against amino acids 294-353 of EDG-7 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

EDG-7 (C-7) is available conjugated to agarose (sc-390270 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-390270 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-390270 PE), fluorescein (sc-390270 FITC), Alexa Fluor® 488 (sc-390270 AF488), Alexa Fluor® 546 (sc-390270 AF546), Alexa Fluor® 594 (sc-390270 AF594) or Alexa Fluor® 647 (sc-390270 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-390270 AF680) or Alexa Fluor® 790 (sc-390270 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

EDG-7 (C-7) is recommended for detection of EDG-7 of human origin by Western Blotting (starting dilution 1:100, 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).

Suitable for use as control antibody for EDG-7 siRNA (h): sc-37088, EDG-7 shRNA Plasmid (h): sc-37088-SH and EDG-7 shRNA (h) Lentiviral Particles: sc-37088-V.

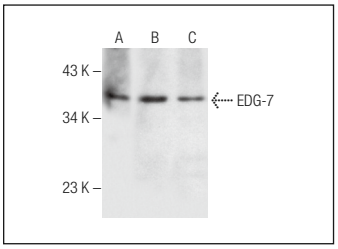
Molecular Weight of EDG-7: 40 kDa.

Positive Controls: SK-N-MC cell lysate: sc-2237, NTERA-2 cl.D1 whole cell lysate: sc-364181 or LNCaP cell lysate: sc-2231.

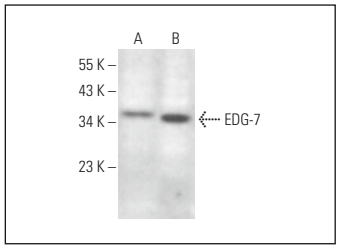
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



EDG-7 (C-7): sc-390270. Western blot analysis of EDG-7 expression in SK-N-MC (**A**), NTERA-2 cl.D1 (**B**) and LNCaP (**C**) whole cell lysates.



EDG-7 (C-7): sc-390270. Western blot analysis of EDG-7 expression in T24 (**A**) and AT3B-1 (**B**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Chiang, J.C., et al. 2020. Lysophosphatidic acid receptors 2 and 3 regulate erythropoiesis at different hematopoietic stages. Biochim. Biophys. Acta Mol. Cell Biol. Lipids 1866: 158818.

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.