SANTA CRUZ BIOTECHNOLOGY, INC.

EDG-5 (F-3): sc-365589

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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. EDG-6, which is expressed in lymphoid and hematopoietic tissues and in lung, 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 (F-3) is a mouse monoclonal antibody raised against amino acids 284-347 of EDG-5 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-5 (F-3) is available conjugated to agarose (sc-365589 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-365589 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-365589 PE), fluorescein (sc-365589 FITC), Alexa Fluor® 488 (sc-365589 AF488), Alexa Fluor® 546 (sc-365589 AF546), Alexa Fluor® 594 (sc-365589 AF594) or Alexa Fluor® 647 (sc-365589 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-365589 AF680) or Alexa Fluor® 790 (sc-365589 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

EDG-5 (F-3) is recommended for detection of EDG-5 of mouse, rat and 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-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.

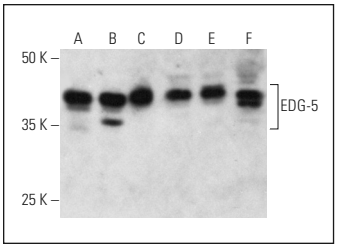
Molecular Weight (predicted) of EDG-5: 39 kDa.

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

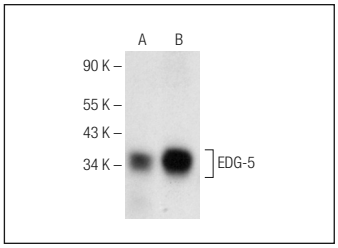
RECOMMENDED SUPPORT REAGENTS

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-5 (F-3): sc-365589. Western blot analysis of EDG-5 expression in ECV304 (**A**), Raji (**B**), NIH/3T3 (**C**), 3T3-L1 (**D**), A-10 (**E**) and NRK (**F**) whole cell lysates.



EDG-5 (F-3): sc-365589. Western blot analysis of EDG-5 expression in HeLa (**A**) and IMR-32 (**B**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Kempf, A., et al. 2014. The sphingolipid receptor S1PR2 is a receptor for Nogo-A repressing synaptic plasticity. PLoS Biol. 12: e1001763.
2. Hu, F., et al. 2019. Nogo-A promotes inflammatory heat hyperalgesia by maintaining TRPV-1 function in the rat dorsal root ganglion neuron. FASEB J. 33: 668-682.
3. Pang, M., et al. 2020. S1PR2 knockdown promotes migration and invasion in multiple myeloma cells via NFκB activation. Cancer Manag. Res. 12: 7857-7865.
4. Salminen, A.T., et al. 2022. Molecular mechanisms underlying the heterogeneous barrier responses of two primary endothelial cell types to sphingosine-1-phosphate. Eur. J. Cell Biol. 101: 151233.
5. Yan, J., et al. 2022. Expression of sphingosine-1-phosphate receptor 2 is correlated with migration and invasion of human colon cancer cells: a preliminary clinical study. Oncol. Lett. 24: 241.

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.