

RASGEF1C (6E12): sc-81933

BACKGROUND

The Ras superfamily of GTPases can be subdivided into the Ras, Rho/Rac, Sar, Rab, ARF and Ran subfamilies and controls multiple aspects of cell function, including cytoskeletal rearrangement, nuclear signaling and cell growth. The Ras superfamily of GTPases function as regulated switches that toggle between a biologically active GTP-bound and an inactive GDP-bound form. This activation is catalyzed by guanine nucleotide exchange factors (GEFs). The RASGEF family of GEFs is highly conserved and the genes encoding the members of this family are present in organisms ranging from nematodes to humans. RASGEF1C (RasGEF domain family member 1C) is a 466 amino acid GEF that contains two RasGEF domains, one at the N-terminus and one at the C-terminus. Due to alternative splicing events, two isoforms exist for RASGEF1C.

REFERENCES

1. Bourne, H.R., Sanders, D.A. and McCormick, F. 1990. The GTPase superfamily: a conserved switch for diverse cell functions. *Nature* 348: 125-132.
2. Boguski, M.S. and McCormick, F. 1993. Proteins regulating Ras and its relatives. *Nature* 366: 643-654.
3. Whitehead, I.P., Khosravi-Far, R., Kirk, H., Trigo-Gonzalez, G., Der, C.J. and Kay, R. 1996. Expression cloning of *lsc*, a novel oncogene with structural similarities to the *Dbl* family of guanine nucleotide exchange factors. *J. Biol. Chem.* 271: 18643-18650.
4. Zohn, I.M., Campbell, S.L., Khosravi-Far, R., Rossman, K.L. and Der, C.J. 1998. Rho family proteins and Ras transformation: the RHOad less traveled gets congested. *Oncogene* 17: 1415-1438.
5. Epting, D., Vorwerk, S., Hageman, A. and Meyer, D. 2007. Expression of RASGEF1B in zebrafish. *Gene Expr. Patterns* 7: 389-395.

CHROMOSOMAL LOCATION

Genetic locus: RASGEF1C (human) mapping to 5q35.3.

SOURCE

RASGEF1C (6E12) is a mouse monoclonal antibody raised against recombinant RASGEF1C of human origin.

PRODUCT

Each vial contains 100 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

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 for detailed protocols and support products.

APPLICATIONS

RASGEF1C (6E12) is recommended for detection of RASGEF1C of 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), immunohistochemistry (including paraffin-embedded sections) (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 RASGEF1C siRNA (h): sc-92003, RASGEF1C shRNA Plasmid (h): sc-92003-SH and RASGEF1C shRNA (h) Lentiviral Particles: sc-92003-V.

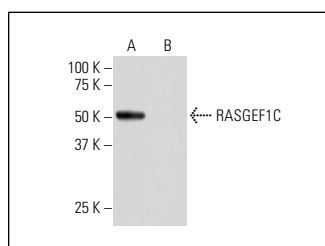
Molecular Weight of RASGEF1C: 53 kDa.

Positive Controls: human RASGEF1C transfected 293T whole cell lysate.

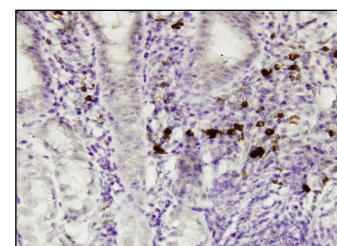
RECOMMENDED SUPPORT REAGENTS

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. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



RASGEF1C (6E12): sc-81933 Western blot analysis of RASGEF1C expression in human RASGEF1C transfected (A) and non-transfected (B) 293T whole cell lysates.



RASGEF1C (6E12): sc-81933. Immunoperoxidase staining of formalin-fixed, paraffin-embedded human stomach tissue showing nuclear and cytoplasmic localization.

SELECT PRODUCT CITATIONS

1. Lee, S.H. and Lee, S. 2019. Change of Ras and its guanosine triphosphatases (GTPases) during development and regression in bovine corpus luteum. *Theriogenology* 144: 16-26.

RESEARCH USE

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