SANTA CRUZ BIOTECHNOLOGY, INC.

RasGRP (R-20): sc-8545

BACKGROUND

The superfamily of GTP-binding proteins, of which Ras proteins are prototypes, has been implicated in a broad range of biological activities. Studies have identified a family of guanine nucleotide-releasing factors (GRFs) that activate Ras in mammalian cells and an "adapter" protein (Sem 5/GRB2) that appears to mediate the interaction of GRFs with activated receptor molecules. Subsequent to activation, Ras appears to interact with Raf, thereby activating the MAP kinase phosphorylation pathway. RasGRP is a guanyl nucleotide-releasing protein for Ras that contains two EF hand domains, which bind to calcium, and a diacylglycerol (DAG)-binding domain. RasGRP is expressed in the nervous system and lymphoid tissues and may link changes in DAG and calcium concentrations to Ras activation.

REFERENCES

1. Lowenstein, E.J., et al. 1992. The SH2 and SH3 domain-containing protein GRB2 links receptor tyrosine kinases to Ras signaling. Cell 40: 431-442.
2. Skolnik, E.Y., et al. 1993. The function of GRB2 in linking the Insulin receptor to Ras signaling pathways. Science 260: 1953-1955.
3. Chardin, P., Camonis, J.H., Gale, N.W., Van Aelst, L., Schlessinger, J., Wigler, M.H. and Bar-Sagi, D. 1993. Human Sos 1: a guanine nucleotide exhange factor for Ras that binds to GRB2. Science 260: 1338-1343.
4. Zhang, X., et al. 1993. Normal and oncogenic p21 Ras proteins bind to the amino-terminal regulatory domain of c-RAF-1. Nature 364: 308-313.
5. Ebinu, J.O., et al. 1998. RasGRP, a Ras guanyl nucleotide-releasing protein with calcium- and diacylglycerol-binding motifs. Science 280: 1082-1086.
6. Tognon, C.E., Kirk, H.E., Passmore, L.A., Whitehead, I.P., Der, C.J. and Kay, R.J. 1998. Regulation of RasGRP via a phorbol ester-responsive C1 domain. Mol. Cell Biol. 18: 6995-7008.

SOURCE

RasGRP (R-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of RasGRP of rat 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-8545 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

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.

PROTOCOLS

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

APPLICATIONS

RasGRP (R-20) is recommended for detection of RasGRP of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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 RasGRP siRNA (h): sc-36397, RasGRP siRNA (m): sc-36398, RasGRP shRNA Plasmid (h): sc-36397-SH, RasGRP shRNA Plasmid (m): sc-36398-SH, RasGRP shRNA (h) Lentiviral Particles: sc-36397-V and RasGRP shRNA (m) Lentiviral Particles: sc-36398-V.

Molecular Weight of RasGRP: 90 kDa.

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

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) 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.

SELECT PRODUCT CITATIONS

1. Madani, S., et al. 2004. Diacylglycerols containing Omega 3 and Omega 6 fatty acids bind to RasGRP and modulate MAP kinase activation. J. Biol. Chem. 279: 1176-1183.