SANTA CRUZ BIOTECHNOLOGY, INC.

RasGRP1 (H-120): sc-28581

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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.

CHROMOSOMAL LOCATION

Genetic locus: RASGRP1 (human) mapping to 15q14; Rasgrp1 (mouse) mapping to 2 E5.

SOURCE

RasGRP1 (H-120) is a rabbit polyclonal antibody raised against amino acids 678-797 mapping at the C-terminus of RasGRP1 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.

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.

APPLICATIONS

RasGRP1 (H-120) is recommended for detection of RasGRP1 of mouse, rat and 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

RasGRP1 (H-120) is also recommended for detection of RasGRP1 in additional species, including equine, canine, bovine and porcine.

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 RasGRP1 isoforms 1/2/3: 90/87/68 kDa.

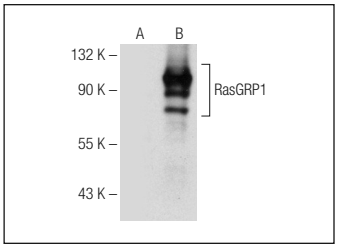
Molecular Weight of RasGRP1 isoforms 4/5: 55/63 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204 or RasGRP1 (h2): 293T Lysate: sc-369489.

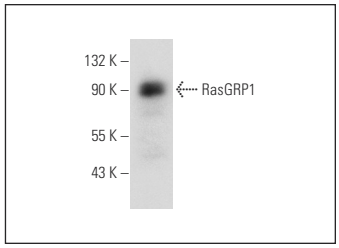
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



RasGRP1 (H-120): sc-28581. Western blot analysis of RasGRP1 expression in non-transfected: sc-117752 (**A**) and human RasGRP1 transfected: sc-369489 (**B**) 293T whole cell lysates.



RasGRP1 (H-120): sc-28581. Western blot analysis of RasGRP1 expression in Jurkat whole cell lysate.

SELECT PRODUCT CITATIONS

1. Rubio, I., et al. 2006. Ras activation in response to phorbol ester proceeds independently of the EGFR via an unconventional nucleotide-exchange factor system in COS-7 cells. Biochem. J. 398: 243-256.
2. Daniels, M.A., et al. 2006. Thymic selection threshold defined by compartmentalization of Ras/MAPK signalling. Nature 444: 724-729.
3. de la Luz Sierra, M., et al. 2010. The transcription factor Gfi1 regulates G-CSF signaling and neutrophil development through the Ras activator RasGRP1. Blood 115: 3970-3979.
4. Pan, W., et al. 2010. MicroRNA-21 and microRNA-148a contribute to DNA hypomethylation in lupus CD4$^+$ T cells by directly and indirectly targeting DNA methyltransferase 1. J. Immunol. 184: 6773-6781.

PROTOCOLS

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