

Rap1GAP (V-19): sc-10331

BACKGROUND

Rap1 GTPase activating protein (Rap1GAP) specifically stimulates GTP hydrolytic activity of the monomeric G protein Rap1. Physical interaction between $G_{\alpha z}$, a member of the G_i family of trimeric G proteins, and Rap1GAP blocks the ability of regulators of G protein signaling to stimulate GTP hydrolysis of the α subunit, and also attenuates the ability of activated $G_{\alpha z}$ to inhibit adenylyl cyclase. Rap1GAP is expressed in brain, kidney and pancreas and may act as a signal integrator to somehow coordinate and/or integrate G_z signaling and Rap1 signaling in cells. A novel isoform of Rap1 GTPase-activating protein, Rap1GAPII, binds specifically to $G_{\alpha z}$. Stimulation of the G_i -coupled M2 muscarinic receptor translocates Rap1GAPII from the cytosol to the membrane and decreases the amount of GTP-bound Rap1, resulting in the activation of ERK/MAPK.

CHROMOSOMAL LOCATION

Genetic locus: RAP1GAP (human) mapping to 1p36.12; Rap1gap (mouse) mapping to 4 D3.

SOURCE

Rap1GAP (V-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of Rap1GAP of human origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-10331 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

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

APPLICATIONS

Rap1GAP (V-19) is recommended for detection of Rap1GAP of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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).

Rap1GAP (V-19) is also recommended for detection of Rap1GAP in additional species, including canine.

Suitable for use as control antibody for Rap1GAP siRNA (h): sc-36388, Rap1GAP siRNA (m): sc-155959, Rap1GAP siRNA (r): sc-270196, Rap1GAP shRNA Plasmid (h): sc-36388-SH, Rap1GAP shRNA Plasmid (m): sc-155959-SH, Rap1GAP shRNA Plasmid (r): sc-270196-SH, Rap1GAP shRNA (h) Lentiviral Particles: sc-36388-V, Rap1GAP shRNA (m) Lentiviral Particles: sc-155959-V and Rap1GAP shRNA (r) Lentiviral Particles: sc-270196-V.

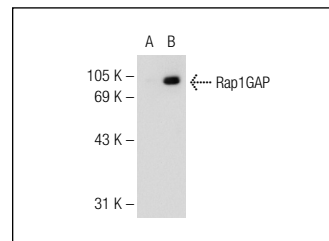
Molecular Weight of Rap1GAP: 89 kDa.

Positive Controls: SK-N-SH cell lysate: sc-2410 or SH-SY5Y cell lysate: sc-3812 or Rap1GAP (h): 293T Lysate: sc-116162.

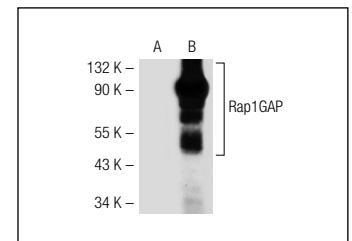
RECOMMENDED SECONDARY REAGENTS

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

DATA



Rap1GAP (V-19): sc-10331. Western blot analysis of Rap1GAP expression in non-transfected: sc-117752 (A) and human Rap1GAP transfected: sc-177841 (B) 293T whole cell lysates.



Rap1GAP (V-19): sc-10331. Western blot analysis of Rap1GAP expression in non-transfected: sc-117752 (A) and human Rap1GAP transfected: sc-116162 (B) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

- Zhang, Q.H., et al. 2005. Profiling of differentially expressed genes in LRRC4 overexpressed glioblastoma cells by cDNA array. *Acta Biochim. Biophys. Sin.* 37: 680-687.

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 or our catalog for detailed protocols and support products.

MONOS
Satisfaction
Guaranteed

Try **Rap1GAP (D-9): sc-166586** or **Rap1GAP (G-1): sc-514543**, our highly recommended monoclonal alternatives to Rap1GAP (V-19).