

Rap1GAPII (G-17): sc-10334

BACKGROUND

Rap1 GTPase activating protein (Rap1GAP) is an 89 kDa protein that specifically stimulates GTP hydrolytic activity of the monomeric G protein Rap1. Physical interaction between G_{α_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_{α_z} to inhibit adenylyl cyclase. Rap1GAP is expressed in the brain, kidney and pancreas and may act as a signal integrator to coordinate and/or integrate G_z signaling and Rap1 signaling in cells. A novel isoform of Rap1 GTPase-activating protein, designated Rap1GAPII, binds specifically to G_{α_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.

REFERENCES

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5. Meng, J., Glick, J.L., Polakis, P. and Casey, P.J. 1999. Functional interaction between G_{α_z} and Rap1GAP suggests a novel form of cellular cross-talk. *J. Biol. Chem.* 274: 36663-36669.

SOURCE

Rap1GAPII (G-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of Rap1GAPII 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-10334 P, (100 μ g 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.

APPLICATIONS

Rap1GAPII (G-17) is recommended for detection of Rap1GAPII of 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).

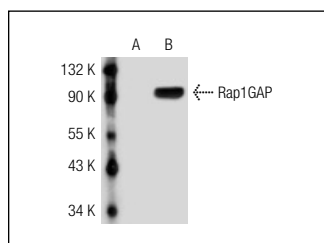
Rap1GAPII (G-17) is also recommended for detection of Rap1GAPII in additional species, including canine.

Molecular Weight of Rap1GAPII: 90 kDa.

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



Rap1GAPII (G-17): sc-10334. Western blot analysis of Rap1GAP expression in non-transfected: sc-117752 (A) and human Rap1GAP transfected: sc-116162 (B) 293T whole cell lysates.

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.