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Rap1GAP (h): 293T Lysate: sc-116162

BACKGROUND

Rap1 GTPase activating protein (Rap1GAP) 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 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 Rap1GAP, 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

1. Janoueix-Lerosey, I., Fontenay, M., Tobelem, G., Tavitian, A., Polakis, P. and de Gunzburg, J. 1994. Phosphorylation of Rap1GAP during the cell cycle. *Biochem. Biophys. Res. Commun.* 202: 967-975.
2. Kurachi, H., Wada, Y., Tsukamoto, N., Maeda, M., Kubota, H., Hattori, M., Iwai, K. and Minato, N. 1997. Human SPA-1 gene product selectively expressed in lymphoid tissues is a specific GTPase-activating protein for Rap1 and Rap2. Segregate expression profiles from a Rap1GAP gene product. *J. Biol. Chem.* 272: 28081-28088.
3. Wada, Y., Kubota, H., Maeda, M., Taniwaki, M., Hattori, M., Imamura, S., Iwai, K. and Minato, N. 1997. Mitogen-inducible Sip1 is mapped to the conserved syntenic groups of chromosome 19 in mouse and chromosome 11q13.3 centromeric to Bcl-1 in human. *Genomics* 39: 66-73.
4. Jordan, J.D., Carey, K.D., Stork, P.J. and Iyengar, R. 1999. Modulation of Rap activity by direct interaction of G_{α_o} with Rap1 GTPase-activating protein. *J. Biol. Chem.* 274: 21507-21510.
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.
6. Mochizuki, N., Ohba, Y., Kiyokawa, E., Kurata, T., Murakami, T., Ozaki, T., Kitabatake, A., Nagashima, K. and Matsuda, M. 1999. Activation of the ERK/MAPK pathway by an isoform of Rap1GAP associated with G_{α_z} . *Nature* 400: 891-894.

CHROMOSOMAL LOCATION

Genetic locus: RAP1GAP (human) mapping to 1p36.12.

PRODUCT

Rap1GAP (h): 293T Lysate represents a lysate of human Rap1GAP transfected 293T cells and is provided as 100 μ g protein in 200 μ l SDS-PAGE buffer.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

APPLICATIONS

Rap1GAP (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive Rap1GAP antibodies. Recommended use: 10-20 μ l per lane.

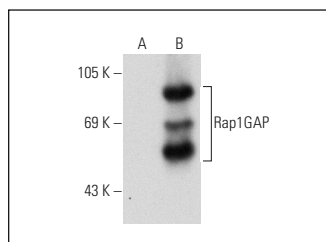
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

Rap1GAP (F-5): sc-166587 is recommended as a positive control antibody for Western Blot analysis of enhanced human Rap1GAP expression in Rap1GAP transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

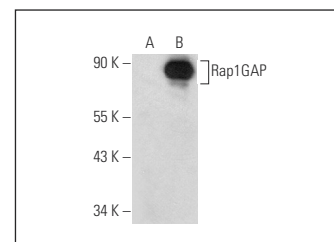
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:
1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ 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.

DATA



Rap1GAP (F-5): sc-166587. Western blot analysis of Rap1GAP expression in non-transfected: sc-117752 (A) and human Rap1GAP transfected: sc-116162 (B) 293T whole cell lysates.



Rap1GAP (G-1): sc-514543. 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 for detailed protocols and support products.