SANTA CRUZ BIOTECHNOLOGY, INC.

RGS2 (H-90): sc-9103

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Heterotrimeric G proteins function to relay information from cell surface receptors to intracellular effectors. In mammals, G protein α, β and γ polypeptides are encoded by at least 16, 4 and 7 genes, respectively. Most interest in G proteins has been focused on their α subunits, since these proteins bind and hydrolyze GTP and most obviously regulate the activity of the best studied effectors. Several G_α GTPase activating proteins (GAPs) have been identified and are designated RGS1, RGS2, RGS4, RGS7, RGS9, RGS10 and GAIP (G_α-interacting protein). Each of these proteins has been shown to deactivate specific G_α isoforms by increasing the rate at which they convert GTP to GDP. RGS2 has been shown to be an inhibitor of $G_{\alpha\, q}$ function. RGS9 expression is restricted to photoreceptor cells and RGS9 has been shown to regulate $G_{\alpha\, t}$.

REFERENCES

1. Simon, M.I., et al. 1991. Diversity of G proteins in signal transduction. Science 252: 802-808.
2. Cali, J.J., et al. 1992. Selective tissue distribution of G protein γ subunits, including a new form of the γ subunits identified by cDNA cloning. J. Biol. Chem. 267: 24023-24027.

CHROMOSOMAL LOCATION

Genetic locus: RGS2 (human) mapping to 1q31.2; Rgs2 (mouse) mapping to 1 F.

SOURCE

RGS2 (H-90) is a rabbit polyclonal antibody raised against amino acids 1-90 of RGS2 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.

APPLICATIONS

RGS2 (H-90) is recommended for detection of RGS2 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).

RGS2 (H-90) is also recommended for detection of RGS2 in additional species, including equine, bovine and porcine.

Suitable for use as control antibody for RGS2 siRNA (h): sc-40659, RGS2 siRNA (m): sc-40660, RGS2 shRNA Plasmid (h): sc-40659-SH, RGS2 shRNA Plasmid (m): sc-40660-SH, RGS2 shRNA (h) Lentiviral Particles: sc-40659-V and RGS2 shRNA (m) Lentiviral Particles: sc-40660-V.

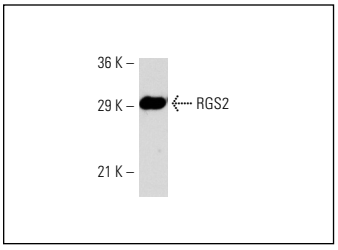
Molecular Weight of RGS2: 32 kDa.

Positive Controls: IMR-32 nuclear extract: sc-2148, MCF7 whole cell lysate: sc-2206 or mouse brain extract: sc-2253.

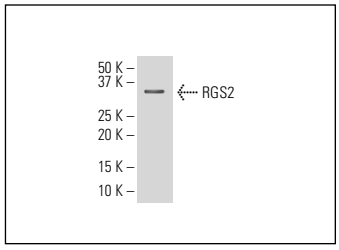
STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

DATA



RGS2 (H-90): sc-9103. Western blot analysis of human recombinant RGS2 fusion protein.



RGS2 (H-90): sc-9103. Western blot analysis of RGS2 expression in IMR-32 nuclear extract.

SELECT PRODUCT CITATIONS

1. Garzon, J., et al. 2001. RGS9 proteins facilitate acute tolerance to µ-opioid effects. Eur. J. Neurosci. 13: 801-811.
2. Ghavami, A., et al. 2004. Differential effects of regulator of G protein signaling (RGS) proteins on serotonin 5-HT1A, 5-HT2A, and dopamine D2 receptor-mediated signaling and adenylyl cyclase activity. Cell. Signal. 16: 711-721.
3. Schwäble, J., et al. 2005. RGS2 is an important target gene of Flt3-ITD mutations in AML and functions in myeloid differentiation and leukemic transformation. Blood 105: 2107-2114.
4. Garzon, J., et al. 2005. Morphine alters the selective association between µ-opioid receptors and specific RGS proteins in mouse periaqueductal gray matter. Neuropharmacology 48: 853-868.
5. Heo, K., et al. 2006. RGS2 promotes formation of neurites by stimulating microtubule polymerization. Cell. Signal. 18: 2182-2192.
6. Romero, D.G., et al. 2006. RGS2 is regulated by Angiotensin II and functions as a negative feedback of aldosterone production in H295R human adrenocortical cells. Endocrinology 147: 3889-3897.
7. Cui, H., et al. 2008. Association of RGS2 gene polymorphisms with suicide and increased RGS2 immunoreactivity in the postmortem brain of suicide victims. Neuropsychopharmacology 33: 1537-1544.

RESEARCH USE

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