

RGS3 (H-300): sc-20759

BACKGROUND

Heterotrimeric G proteins function to relay information from cell surface receptors to various intracellular effectors. G proteins comprise α , β and γ subunits, and following activation, the α subunit binds GTP and dissociates from the $\beta\gamma$ complex. A large group of proteins have been identified as GTPase-activating proteins (GAPs), including the RGS (regulator of G protein signaling) family, which serve to deactivate specific G_{α} isoforms by increasing the rate at which they convert GTP to GDP. RGS3 is a protein of the RGS family that preferentially binds to the activated form of $G_{\alpha 11}$. Through this association, RGS3 inhibits $G_{\alpha 11}$ -induced signaling, leading to a decrease in the accumulation of intracellular calcium and the inhibition of MAP kinase phosphorylation. RGS3 is highly expressed in adult kidney and myocardium, and it is primarily localized to the cytoplasm. Upon activation of $G_{\alpha 11}$, RGS3 translocates from the cytosol to the plasma membrane, thereby bringing RGS3 within close proximity to the targeted G protein.

REFERENCES

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- Chatterjee, T.K., et al. 1997. Genomic organization, 5'-flanking region, and chromosomal localization of the human RGS3 gene. *Genomics* 45: 429-433.
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- Guan, K.L. and Han, M. 1999. A G-protein signaling network mediated by an RGS protein. *Genes Dev.* 13: 1763-1767.
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- Dulin, N.O., et al. 1999. RGS3 inhibits G protein-mediated signaling via translocation to the membrane and binding to $G_{\alpha 11}$. *Mol. Cell. Biol.* 19: 714-723.

CHROMOSOMAL LOCATION

Genetic locus: RGS3 (human) mapping to 9q32.

SOURCE

RGS3 (H-300) is a rabbit polyclonal antibody raised against amino acids 1-300 of RGS3 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.

RESEARCH USE

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

APPLICATIONS

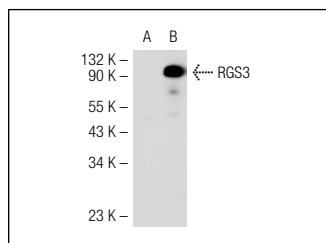
RGS3 (H-300) is recommended for detection of RGS3 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for RGS3 siRNA (h): sc-40661, RGS3 shRNA Plasmid (h): sc-40661-SH and RGS3 shRNA (h) Lentiviral Particles: sc-40661-V.

Molecular Weight of RGS3 long isoform: 75 kDa.

Molecular Weight of RGS3 short isoform: 25 kDa.

DATA



RGS3 (H-300): sc-20759. Western blot analysis of RGS3 expression in non-transfected: sc-117752 (A) and mouse RGS3 transfected: sc-125903 (B) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

- Vogt, A., et al. 2007. Regulator of G-protein signalling 3 redirects prototypical Gi-coupled receptors from Rac1 to RhoA activation. *Cell. Signal.* 19: 1229-1237.

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.



Try **RGS3 (CC-Q7): sc-100762**, our highly recommended monoclonal alternative to RGS3 (H-300).