SANTA CRUZ BIOTECHNOLOGY, INC.

RGS16 (m): 293T Lysate: sc-123100

BACKGROUND

Regulators of G-protein signaling (RGS proteins) are a family of highly diverse, multifunctional signaling proteins that share a conserved 120 amino acid domain (RGS domain). RGS domains bind directly to activated G_α subunits and act as GTPase-activating proteins (GAPs) to attenuate and/or modulate hormone and neurotransmitter receptor-initiated signaling by both G_α-GTP and $G_{\beta\gamma}$. RGS proteins shorten the lifetime of the activated G protein. RGS16 is expressed at high levels in retina. Overexpression of RGS16 inhibits G protein-coupled mitogenic signal transduction and activation of the mitogen-activated protein kinase (MAPK) signaling cascade. RGS16 enhances the rate of GTP-hydrolysis by transducin, suggesting that RGS16 may play a role in regulating the kinetics of signaling in the phototransduction cascade. The gene which encodes RGS16 maps to human chromosome 1q25.3.

REFERENCES

1. Chen, C.K., et al. 1996. RGS-r, a retinal specific RGS protein, binds an intermediate conformation of transducin and enhances recycling. Proc. Natl. Acad. Sci. USA 93: 12885-12889.
2. Kardestuncer, T., et al. 1998. Cardiac myocytes express mRNA for ten RGS proteins: changes in RGS mRNA expression in ventricular myocytes and cultured atria. FEBS Lett. 438: 285-288.
3. Snow, B.E., et al. 1998. Cloning of a retinally abundant regulator of G protein signaling (RGS-r/RGS16): genomic structure and chromosomal localization of the human gene. Gene 206: 247-253.
4. Hepler, J.R. 1999. Emerging roles for RGS proteins in cell signalling. Trends Pharmacol. Sci. 20: 376-382.
5. Online Mendelian Inheritance in Man, OMIM™. 2001. Johns Hopkins University, Baltimore, MD. MIM Number: 602514. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/

CHROMOSOMAL LOCATION

Genetic locus: Rgs16 (mouse) mapping to 1 G3.

PRODUCT

RGS16 (m): 293T Lysate represents a lysate of mouse RGS16 transfected 293T cells and is provided as 100 µg protein in 200 µl 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

RGS16 (m): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive RGS16 antibodies. Recommended use: 10-20 µl per lane.

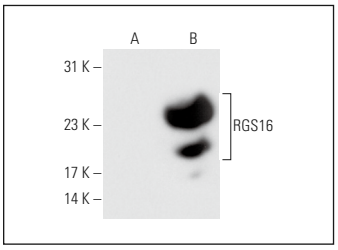
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

RGS16 (A-9): sc-166083 is recommended as a positive control antibody for Western Blot analysis of enhanced mouse RGS16 expression in RGS16 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

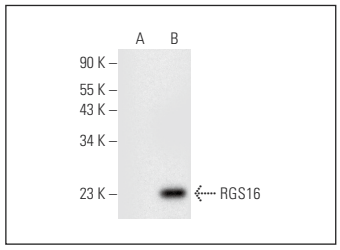
RECOMMENDED SUPPORT REAGENTS

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



RGS16 (A-9): sc-166083. Western blot analysis of RGS16 expression in non-transfected: sc-117752 (**A**) and mouse RGS16 transfected: sc-123100 (**B**) 293T whole cell lysates.



RGS16 (F-9): sc-398120. Western blot analysis of RGS16 expression in non-transfected: sc-117752 (**A**) and mouse RGS16 transfected: sc-123100 (**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.