SANTA CRUZ BIOTECHNOLOGY, INC.

RGS4 (h): 293T Lysate: sc-116320

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. Four G_α GTPase-activating proteins (GAPs) have been identified and are designated RGS1 (regulator of G protein signaling 1), RGS4, 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. RGS1, RGS4 and GAIP bind tightly to and exhibit GAP activity towards $G_{\alpha\,i}$, $G_{\alpha\,o}$ and $G_{\alpha\,t}$, but not $G_{\alpha\,s}$. RGS10 increases the GTP hydrolytic activity of several members of the $G_{\alpha\,i}$ subfamily including $G_{\alpha\,i\text{-}3}$, $G_{\alpha\,z}$ and $G_{\alpha\,o}$.

REFERENCES

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2. von Weizsacker, E., et al. 1992. Diversity among the β subunits of heterotrimeric GTP-binding proteins: characterization of a novel β subunit cDNA. Biochem. Biophys. Res. Comm. 183: 350-356.
3. McLaughlin, S.K., et al. 1992. Gustducin is a taste-cell-specific G protein closely related to the transducins. Nature 357: 563-569.
4. Kleuss, C., et al. 1992. Different β subunits determine G protein interaction with transmembrane receptors. Nature 358: 424-426.
5. 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.
6. Conklin, B.R., et al. 1993. Structural elements of G_α subunits that interact with $G_{\beta\,\gamma}$, receptors, and effectors. Cell 73: 631-641.
7. Watson, N., et al. 1996. RGS family members: GTPase-activating proteins for heterotrimeric G-protein α-subunits. Nature 383: 172-175.
8. Hunt, T.W., et al. 1996. RGS10 is a selective activator of $G_{\alpha\,i}$ GTPase activity. Nature 383: 175-177.

CHROMOSOMAL LOCATION

Genetic locus: RGS4 (human) mapping to 1q23.3.

PRODUCT

RGS4 (h): 293T Lysate represents a lysate of human RGS4 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.

RESEARCH USE

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

APPLICATIONS

RGS4 (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive RGS4 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.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.