SANTA CRUZ BIOTECHNOLOGY, INC.

RGS10 (A-8): sc-46679

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), 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 $G_{\alpha\,i}$ sub-family, including $G_{\alpha\,i\text{-}3}$, $G_{\alpha\,z}$ and $G_{\alpha\,o}$.

CHROMOSOMAL LOCATION

Genetic locus: RGS10 (human) mapping to 10q26.11.

SOURCE

RGS10 (A-8) is a mouse monoclonal antibody raised against amino acids 15-173 of RGS10 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

RGS10 (A-8) is available conjugated to agarose (sc-46679 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-46679 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-46679 PE), fluorescein (sc-46679 FITC), Alexa Fluor® 488 (sc-46679 AF488), Alexa Fluor® 546 (sc-46679 AF546), Alexa Fluor® 594 (sc-46679 AF594) or Alexa Fluor® 647 (sc-46679 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-46679 AF680) or Alexa Fluor® 790 (sc-46679 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

RGS10 (A-8) is recommended for detection of RGS10 of human origin by Western Blotting (starting dilution 1:100, 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), immunohistochemistry (including paraffin-embedded sections) (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 RGS10 siRNA (h): sc-36410, RGS10 shRNA Plasmid (h): sc-36410-SH and RGS10 shRNA (h) Lentiviral Particles: sc-36410-V.

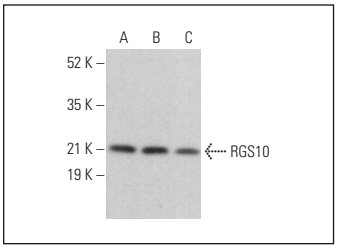
Molecular Weight of RGS10: 20 kDa.

Positive Controls: CCRF-CEM cell lysate: sc-2225, A-431 whole cell lysate: sc-2201 or Ramos cell lysate: sc-2216.

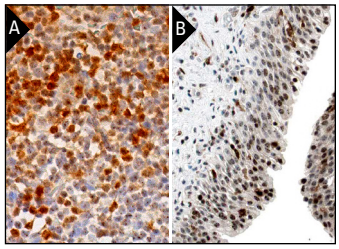
RECOMMENDED SUPPORT REAGENTS

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. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



RGS10 (A-8): sc-46679. Western blot analysis of RGS10 expression in CCRF-CEM (**A**), Ramos (**B**) and A-431 (**C**) whole cell lysates. Detection reagent used: m-IgGκ BP-HRP: sc-516102.



RGS10 (A-8): sc-46679. Immunoperoxidase staining of formalin fixed, paraffin-embedded human tonsil tissue showing nuclear staining of cells in germinal center and nuclear and cytoplasmic staining of cells in non-germinal center (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human urinary bladder tissue showing nuclear staining of surface epithelial cells Kindly provided by The Swedish Human Protein Atlas (HPA) program (**B**).

SELECT PRODUCT CITATIONS

1. Ma, P., et al. 2012. A newly identified complex of spinophilin and the tyrosine phosphatase, SHP-1, modulates platelet activation by regulating G protein-dependent signaling. Blood 119: 1935-1945.

STORAGE

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

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.