SANTA CRUZ BIOTECHNOLOGY, INC.

ARHGAP17 (G-6): sc-514438

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The Power to Question

BACKGROUND

GTPase-activating proteins (GAPs) accelerate the intrinsic rate of GTP hydrolysis of Ras-related proteins, resulting in down regulation of their active form. ARHGAP17 (Rho GTPase activating protein 17), also known as RICH1, WBP15, MST066, MST110, NADRIN, PP4534, RICH1B, MSTP038, MSTP066 or MSTP110, is a ubiquitously expressed peripheral membrane protein whose expression is highest in heart and placenta. ARHGAP17 is involved in the maintenance of tight junctions by regulating the activity of Cdc42, thereby playing a central role in apical polarity of epithelial cells. Containina a BAR domain and a Rho-GAP domain, ARHGAP17 acts as a GTPase activator for the Cdc42 GTPase by converting it to an inactive GDP-bound state. ARHGAP17 may also participate in the Ca^{2+}-dependent regulation of exocytosis by catalyzing GTPase activity of Rho family proteins and by inducing the reorganization of cortical actin filaments. ARHGAP17 exists as seven alternative splice variants.

REFERENCES

1. Harada, A., et al. 2000. Nadrin, a novel neuron-specific GTPase-activating protein involved in regulated exocytosis. J. Biol. Chem. 275: 36885-36891.
2. Richnau, N. and Aspenström, P. 2001. Rich, a Rho GTPase-activating protein domain-containing protein involved in signaling by Cdc42 and Rac1. J. Biol. Chem. 276: 35060-35070.
3. Reczek, D. and Bretscher, A. 2001. Identification of EPI64, a TBC/rabGAP domain-containing microvillar protein that binds to the first PDZ domain of EBP50 and E3KARP. J. Cell Biol. 153: 191-206.

CHROMOSOMAL LOCATION

Genetic locus: ARHGAP17 (human) mapping to 16p12.1; Arhgap17 (mouse) mapping to 7 F3.

SOURCE

ARHGAP17 (G-6) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 303-327 within an internal region of ARHGAP17 of human origin.

PRODUCT

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

ARHGAP17 (G-6) is available conjugated to agarose (sc-514438 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-514438 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-514438 PE), fluorescein (sc-514438 FITC), Alexa Fluor® 488 (sc-514438 AF488), Alexa Fluor® 546 (sc-514438 AF546), Alexa Fluor® 594 (sc-514438 AF594) or Alexa Fluor® 647 (sc-514438 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-514438 AF680) or Alexa Fluor® 790 (sc-514438 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-514438 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

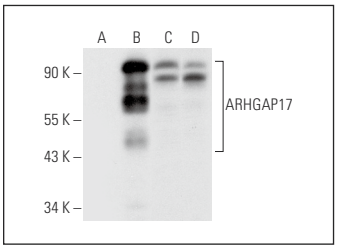
ARHGAP17 (G-6) is recommended for detection of ARHGAP17 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for ARHGAP17 siRNA (h): sc-93486, ARHGAP17 siRNA (m): sc-141204, ARHGAP17 shRNA Plasmid (h): sc-93486-SH, ARHGAP17 shRNA Plasmid (m): sc-141204-SH, ARHGAP17 shRNA (h) Lentiviral Particles: sc-93486-V and ARHGAP17 shRNA (m) Lentiviral Particles: sc-141204-V.

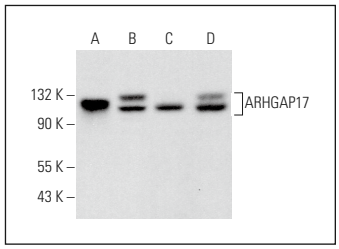
Molecular Weight of ARHGAP17: 95 kDa.

Positive Controls: ARHGAP17 (h2): 293T Lysate: sc-111410, T24 cell lysate: sc-2292 or RT-4 whole cell lysate: sc-364257.

DATA



ARHGAP17 (G-6): sc-514438. Western blot analysis of ARHGAP17 expression in non-transfected 293T: sc-117752 (**A**), human ARHGAP17 transfected 293T: sc-111410 (**B**), T24 (**C**) and RT-4 (**D**) whole cell lysates.



ARHGAP17 (G-6): sc-514438. Western blot analysis of ARHGAP17 expression in U-251-MG (**A**), Hep G2 (**B**), TF-1 (**C**) and U-698-M (**D**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Escobar-Hoyos, L.F., et al. 2020. Altered RNA splicing by mutant p53 activates oncogenic RAS signaling in pancreatic cancer. Cancer Cell 38: 198-211.e8.
2. Tian, Q., et al. 2022. RICH1 inhibits breast cancer stem cell traits through activating kinases cascade of Hippo signaling by competing with Merlin for binding to Amot-p80. Cell Death Dis. 13: 71.
3. Wu, P.R., et al. 2023. Wdr4 promotes cerebellar development and locomotion through Arhgap17-mediated Rac1 activation. Cell Death Dis. 14: 52.

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.