SANTA CRUZ BIOTECHNOLOGY, INC.

# ARHGAP4 (E-18): sc-131401

## BACKGROUND

ARHGAP4 (Rho GTPase activating protein 4), also known as RGC1 (Rho-GAP hematopoietic protein C1), C1, p115 or RhoGAP4, is a cytoplasmic protein belonging to the Rho GTPase activating protein family. ARHGAP4 contains one Rho-GAP domain, one FCH (Fps/Fes/Fer/CIP4 homology) domain and one SH3 (Src homology 3) domain. Highest expression levels of ARHGAP4 are found in hematopoietic cells, however, it can also be found in lung, placenta and some fetal tissues. ARHGAP4 localizes to the leading edge in migrating cells, axons and growth cones and is believed to participate as an inhibitor of cell motility and axon outgrowth through its regulation of cytoskeletal dynamics. In addition, ARHGAP4 is capable of inhibiting the activity Rho GTPases, such as Cdc42 and Rac 1, that function to promote cell motility and axon outgrowth.

## REFERENCES


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2. Schöneberg, T., et al. 1999. Compound deletion of the rhoGAP C1 and V2 vasopressin receptor genes in a patient with nephrogenic diabetes insipidus. Hum. Mutat. 14: 163-174.
3. Foletta, V.C., et al. 2002. Cloning of rat ARHGAP4/C1, a RhoGAP family member expressed in the nervous system that colocalizes with the Golgi complex and microtubules. Brain Res. Mol. Brain Res. 107: 65-79.
4. Christerson, L.B., et al. 2002. p115 Rho GTPase activating protein interacts with MEKK1. J. Cell. Physiol. 192: 200-208.
5. Demura, M., et al. 2002. Two novel types of contiguous gene deletion of the AVPR2 and ARHGAP4 genes in unrelated Japanese kindreds with nephrogenic diabetes insipidus. Hum. Mutat. 19: 23-29.
6. Katoh, M., et al. 2003. FNBP2 gene on human chromosome 1q32.1 encodes ARHGAP family protein with FCH, FBH, RhoGAP and SH3 domains. Int. J. Mol. Med. 11: 791-797.
7. Qian, J., et al. 2006. Regulation of FasL expression: a SH3 domain containing protein family involved in the lysosomal association of FasL. Cell. Signal. 18: 1327-1337.
8. Broides, A., et al. 2006. Severe combined immunodeficiency associated with nephrogenic diabetes insipidus and a deletion in the Xq28 region. Clin. Immunol. 120: 147-155.
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## CHROMOSOMAL LOCATION

Genetic locus: ARHGAP4 (human) mapping to Xq28; Arhgap4 (mouse) mapping to X A7.3.

## SOURCE

ARHGAP4 (E-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of ARHGAP4 of human origin.

## PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-131401 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

ARHGAP4 (E-18) is recommended for detection of ARHGAP4 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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); non cross-reactive with other ARHGAP family members.

Suitable for use as control antibody for ARHGAP4 siRNA (h): sc-91158, ARHGAP4 siRNA (m): sc-141217, ARHGAP4 shRNA Plasmid (h): sc-91158-SH, ARHGAP4 shRNA Plasmid (m): sc-141217-SH, ARHGAP4 shRNA (h) Lentiviral Particles: sc-91158-V and ARHGAP4 shRNA (m) Lentiviral Particles: sc-141217-V.

Molecular Weight of ARHGAP4: 115 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## 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 or our catalog for detailed protocols and support products.