ARHGAP27 (K-17): sc-163702

SANTA CRUZ®

BIOTECHNOLOGY

The Power to Question

BACKGROUND

ARHGAP27 (Rho GTPase activating protein 27), also known as CAMGAP1, is an 889 amino acid protein that localizes to both the cytoplasm and to the peripheral membrane and contains one PH domain, one Rho GAP domain, one SH3 domain and three WW domains. Expressed in spleen, kidney, lung, small intestine and thymus, ARHGAP27 functions as a Rho GTPase-activating protein that interacts with CIN85 and is thought to be involved in clathrin-mediated endocytosis. Overexpression of ARHGAP27 is associated with chronic lymphocytic leukemia, as well as with pancreatic and lung cancer, suggesting an involvement in tumorigenesis. ARHGAP27 exhibits specific activity towards Rac 1 and Cdc42, effectively converting them to inactive, GDP-bound proteins. Multiple isoforms of ARHGAP27 exist due to alternative splicing events.

REFERENCES

1. Mayer, B.J. and Baltimore, D. 1993. Signalling through SH2 and SH3 domains. Trends Cell Biol. 3: 8-13.

2. Gamblin, S.J. and Smerdon, S.J. 1998. GTPase-activating proteins and their complexes. Curr. Opin. Struct. Biol. 8: 195-201.

3. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 610591. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/

4. Sakakibara, T., Nemoto, Y., Nukiwa, T. and Takeshima, H. 2004. Identification and characterization of a novel Rho GTPase activating protein implicated in receptor-mediated endocytosis. FEBS Lett. 566: 294-300.

5. Katoh, Y. and Katoh, M. 2004. Identification and characterization of ARHGAP27 gene in silico. Int. J. Mol. Med. 14: 943-947.

6. Bonazzi, V.F., Irwin, D. and Hayward, N.K. 2009. Identification of candidate tumor suppressor genes inactivated by promoter methylation in melanoma. Genes Chromosomes Cancer 48: 10-21.

CHROMOSOMAL LOCATION

Genetic locus: ARHGAP27 (human) mapping to 17q21.31; Arhgap27 (mouse) mapping to 11 E1.

SOURCE

ARHGAP27 (K-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of ARHGAP27 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-163702 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

ARHGAP27 (K-17) is recommended for detection of ARHGAP27 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.

ARHGAP27 (K-17) is also recommended for detection of ARHGAP27 in additional species, including equine and porcine.

Suitable for use as control antibody for ARHGAP27 siRNA (h): sc-93628, Arhgap27 siRNA (m): sc-141213, ARHGAP27 shRNA Plasmid (h): sc-93628-SH, Arhgap27 shRNA Plasmid (m): sc-141213-SH, ARHGAP27 shRNA (h) Lentiviral Particles: sc-93628-V and Arhgap27 shRNA (m) Lentiviral Particles: sc-141213-V.

Molecular Weight of ARHGAP27: 98 kDa.

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.

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.