SANTA CRUZ BIOTECHNOLOGY, INC.

ARHGAP11A (G-12): sc-160143

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

GTPase-activating proteins (GAPs) accelerate the intrinsic rate of GTP hydrolysis of Ras-related proteins, resulting in downregulation of their active form. ARHGAP11A (Rho GTPase activating protein 11A), also known as KIAA0013 or MGC70740, is a 1,023 amino acid protein that contains one helical Rho-GAP domain. ARHGAP11A is encoded by a gene located on human chromosome 15. Defects in the gene encoding ARHGAP11A may cause mental retardation. Human chromosome 15 encodes over 700 genes and comprises nearly 3% of the human genome. Angelman and Prader-Willi syndromes are associated with loss of function or deletion of genes in the 15q11-q13 region. In the case of Angelman syndrome, this loss is due to inactivity of the maternal 15q11-q13 encoded UBE3A gene in the brain by either chromosomal deletion or mutation. In cases of Prader-Willi syndrome, there is a partial or complete deletion of this region from the paternal copy of chromosome 15. Tay-Sachs disease is a lethal disorder associated with mutations of the HEXA gene, which is encoded by chromosome 15. Marfan syndrome is associated with chromosome 15 through the FBN1 gene.

REFERENCES

1. Katoh, Y. and Katoh, M. 2004. Identification and characterization of ARHGAP27 gene *in silico*. Int. J. Mol. Med. 14: 943-947.
2. Katoh, M. and Katoh, M. 2004. Characterization of human ARHGAP10 gene *in silico*. Int. J. Oncol. 25: 1201-1206.
3. Wennerberg, K. and Der, C.J. 2004. Rho-family GTPases: it's not only Rac and Rho (and I like it). J. Cell Sci. 117: 1301-1312.
4. Kandpal, R.P. 2006. Rho GTPase activating proteins in cancer phenotypes. Curr. Protein Pept. Sci. 7: 355-365.
5. Zody, M.C., Garber, M., Sharpe, T., Young, S.K., Rowen, L., O'Neill, K., Whittaker, C.A., Kamal, M., Chang, J.L., Cuomo, C.A., Dewar, K., Fitzgerald, M.G., Kodira, C.D., Madan, A., Qin, S., Yang, X., Abbasi, N., et al. 2006. Analysis of the DNA sequence and duplication history of human chromosome 15. Nature 440: 671-675.
6. Lv, L., Xu, J., Zhao, S., Chen, C., Zhao, X., Gu, S., Ji, C., Xie, Y. and Mao, Y. 2007. Sequence analysis of a human RhoGAP domain-containing gene and characterization of its expression in human multiple tissues. DNA Seq. 18: 184-189.
7. Diene, G., Postel-Vinay, A., Pinto, G., Polak, M. and Tauber, M. 2007. The Prader-Willi syndrome. Ann. Endocrinol. 68: 129-137.
8. Lalande, M. and Calciano, M.A. 2007. Molecular epigenetics of Angelman syndrome. Cell. Mol. Life Sci. 64: 947-960.
9. Makoff, A.J. and Flomen, R.H. 2007. Detailed analysis of 15q11-q14 sequence corrects errors and gaps in the public access sequence to fully reveal large segmental duplications at breakpoints for Prader-Willi, Angelman, and inv dup(15) syndromes. Genome Biol. 8: R114.

CHROMOSOMAL LOCATION

Genetic locus: ARHGAP11A (human) mapping to 15q13.3; Arhgap11a (mouse) mapping to 2 E4.

SOURCE

ARHGAP11A (G-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of ARHGAP11A 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-160143 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

ARHGAP11A of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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); non cross-reactive with ARHGAP11B.

ARHGAP11A (G-12) is also recommended for detection of ARHGAP11A in additional species, including porcine.

Suitable for use as control antibody for ARHGAP11A siRNA (h): sc-90027, ARHGAP11A siRNA (m): sc-141201, ARHGAP11A shRNA Plasmid (h): sc-90027-SH, ARHGAP11A shRNA Plasmid (m): sc-141201-SH, ARHGAP11A shRNA (h) Lentiviral Particles: sc-90027-V and ARHGAP11A shRNA (m) Lentiviral Particles: sc-141201-V.

Molecular Weight of ARHGAP11A: 114 kDa.

Positive Controls: Caki-1 cell lysate: sc-2224.

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.