

ARHGAP30 (S-13): sc-138136

BACKGROUND

GTPase-activating proteins (GAPs) accelerate the intrinsic rate of GTP hydrolysis of Ras-related proteins, resulting in downregulation of their active form. ARHGAP30 (Rho GTPase activating protein 30), also known as Rho-type GTPase-activating protein 30, is a 1,101 amino acid protein that contains one Rho-GAP domain and exists as 4 alternatively spliced isoforms. Conserved in chimpanzee, canine, bovine, mouse and rat, ARHGAP30 is among the most neurite-enriched GAPs, which also includes ARHGAP21, FNBP2 and Bcr). One of four single-nucleotide polymorphisms (SNPs) at the USF-1 gene locus, rs2774279, which is located in the promoter area of the USF-1 gene, which is in turn located within its flanking gene ARHGAP30, is linked to low-density lipoprotein cholesterol levels, incident type 2 diabetes mellitus and increased cardiovascular risk.

REFERENCES

- Reiner, A.P., et al. 2007. USF1 gene variants, cardiovascular risk, and mortality in European Americans: analysis of two US cohort studies. *Arterioscler. Thromb. Vasc. Biol.* 27: 2736-2742.
- Auro, K., et al. 2008. USF1 gene variants contribute to metabolic traits in men in a longitudinal 32-year follow-up study. *Diabetologia* 51: 464-472.
- Holzappel, C., et al. 2008. Genetic variants in the USF1 gene are associated with low-density lipoprotein cholesterol levels and incident type 2 diabetes mellitus in women: results from the MONICA/KORA Augsburg case-cohort study, 1984-2002. *Eur. J. Endocrinol.* 159: 407-416.
- Ong, K.L., et al. 2008. Association of F11 receptor gene polymorphisms with central obesity and blood pressure. *J. Intern. Med.* 263: 322-332.
- Pertz, O.C., et al. 2008. Spatial mapping of the neurite and soma proteomes reveals a functional Cdc42/Rac regulatory network. *Proc. Natl. Acad. Sci. USA* 105: 1931-1936.
- Singmann, P., et al. 2009. Gene-gene interaction between APOA5 and USF1: two candidate genes for the metabolic syndrome. *Obes. Facts* 2: 235-242.
- Wu, S., et al. 2010. Upstream transcription factor 1 influences plasma lipid and metabolic traits in mice. *Hum. Mol. Genet.* 19: 597-608.
- Tseng, L.H., et al. 2010. Genome-based expression profiling study of Hunner's ulcer type interstitial cystitis: an array of 40-gene model. *Int. Urogynecol. J. Pelvic Floor Dysfunct.* 21: 911-918.

CHROMOSOMAL LOCATION

Genetic locus: ARHGAP30 (human) mapping to 1q23.3; Arhgap30 (mouse) mapping to 1 H3.

SOURCE

ARHGAP30 (S-13) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping within an internal region of ARHGAP30 of human origin.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-138136 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

ARHGAP30 (S-13) is recommended for detection of ARHGAP30 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:50-1:500), immunofluorescence (starting dilution 1:25, dilution range 1:25-1:250) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); non cross-reactive with other ARHGAP family members.

ARHGAP30 (S-13) is also recommended for detection of ARHGAP30 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for ARHGAP30 siRNA (h): sc-78766, ARHGAP30 siRNA (m): sc-141216, ARHGAP30 shRNA Plasmid (h): sc-78766-SH, ARHGAP30 shRNA Plasmid (m): sc-141216-SH, ARHGAP30 shRNA (h) Lentiviral Particles: sc-78766-V and ARHGAP30 shRNA (m) Lentiviral Particles: sc-141216-V.

Molecular Weight of ARHGAP30 isoforms 1/2/3/4: 119/96/101/28 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (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.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.