SANTA CRUZ BIOTECHNOLOGY, INC.

AGAP1 (N-15): sc-47786

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

ARFGAP with GTP-binding protein-like, Ankyrin repeat and pleckstrin homology domains 1 (AGAP1), also designated Centaurin γ2 (CENTG2), is a member of the ADP ribosylation factor family of ARF6 GTPase-activating proteins (GAP). GAPs are important regulators of ARF function by controlling ARFs return to its inactive state. AGAP1, which is endosome-associated and phosphoinositide-dependent, regulates the adapter protein 3 (AP-3)-dependent trafficking of proteins in the endosomal-lysosomal system. The protein associates with the endocytic compartment in the cytoplasm and has an effect on the Actin cytoskeleton. Overexpression of AGAP1 induces a loss of Actin stress fibers. AGAP1 is related to ACAP1 and ASAP1, and all three proteins are similarly expressed in fibroblast cells such as NIH/3T3.

REFERENCES

1. Nie, Z., et al. 2002. AGAP1, an endosome-associated, phosphoinositide-dependent ADP-ribosylation factor, GTPase-activating protein that affects Actin cytoskeleton. J. Biol. Chem. 277: 48965-48975.
2. Nie, Z., et al. 2003. Specific regulation of the adaptor protein complex AP-3 by the ARFGAP AGAP1. Dev. Cell 5: 513-521.
3. Meurer, S., et al. 2004. AGAP1, a novel binding partner of nitric oxide-sensitive guanylyl cyclase. J. Biol. Chem. 279: 49346-49354.
4. Che, M.M., et al. 2005. Assays and properties of the ARFGAPs AGAP1, ASAP1 and ARFGAP1. Meth. Enzymol. 404: 147-163.
5. Nie, Z., et al. 2005. The ARFGAPs AGAP1 and AGAP2 distinguish between the adaptor protein complexes AP-1 and AP-3. J. Cell Sci. 118: 3555-3566.
6. Wassink, T.H., et al. 2005. Evaluation of the chromosome 2q37.3 gene CENTG2 as an autism susceptibility gene. Am. J. Med. Genet. B Neuropsychiatr. Genet. 136: 36-44.
7. SWISS-PROT/TrEMBL (Q9UPQ3). World Wide Web URL: http://www.expasy.ch/sprot/sprot-top.html

CHROMOSOMAL LOCATION

Genetic locus: AGAP1 (human) mapping to 2q37.2; Agap1 (mouse) mapping to 1 D.

SOURCE

AGAP1 (N-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of AGAP1 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-47786 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

AGAP1 (N-15) is recommended for detection of AGAP1 isoforms 1, 2 and 3 of mouse 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).

AGAP1 (N-15) is also recommended for detection of AGAP1 isoforms 1, 2 and 3 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for AGAP1 siRNA (h): sc-44443, AGAP1 siRNA (m): sc-140903, AGAP1 shRNA Plasmid (h): sc-44443-SH, AGAP1 shRNA Plasmid (m): sc-140903-SH, AGAP1 shRNA (h) Lentiviral Particles: sc-44443-V and AGAP1 shRNA (m) Lentiviral Particles: sc-140903-V.

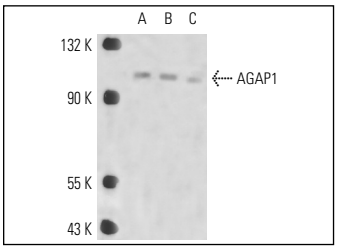
Molecular Weight of AGAP1: 94 kDa.

Positive Controls: NIH/3T3 whole cell lysate: sc-2210, SW480 cell lysate: sc-2219 or Jurkat whole cell lysate: sc-2204.

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.

DATA



AGAP1 (N-15): sc-47786. Western blot analysis of AGAP1 expression in NIH/3T3 (**A**), SW480 (**B**) and Jurkat (**C**) whole cell lysates.

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.