

TBC1D22A (Q-16): sc-86902

BACKGROUND

GTPase-activating proteins (GAPs) accelerate the intrinsic rate of GTP hydrolysis of Ras-related proteins, resulting in downregulation of their active form. TBC1D22A (TBC1 domain family, member 22A), also known as C22orf4, is a 517 amino acid protein that contains one Rab-GAP TBC domain and is thought to function as a GTPase-activating protein for Rab family members. Multiple isoforms of TBC1D22A exist due to alternative splicing events. The gene encoding TBC1D22A maps to human chromosome 22, which houses over 500 genes and is the second smallest human chromosome. Mutations in several of the genes that map to chromosome 22 are involved in the development of Phelan-McDermid syndrome, neurofibromatosis type 2, autism and schizophrenia. Additionally, translocations between chromosomes 9 and 22 may lead to the formation of the Philadelphia chromosome and the subsequent production of the novel fusion protein Bcr-Abl, a potent cell proliferation activator found in several types of leukemias.

REFERENCES

- Gilbert, F. 1998. Disease genes and chromosomes: disease maps of the human genome. Chromosome 22. Genet. Test. 2: 89-97.
- Schwab, S.G. and Wildenauer, D.B. 1999. Chromosome 22 workshop report. Am. J. Med. Genet. 88: 276-278.
- Arinami, T. 2006. Analyses of the associations between the genes of 22q11 deletion syndrome and schizophrenia. J. Hum. Genet. 51: 1037-1045.
- Hay, B.N. 2007. Deletion 22q11: spectrum of associated disorders. Semin. Pediatr. Neurol. 14: 136-139.
- Tsilchorozidou, T., Menko, F.H., Laloo, F., Kidd, A., De Silva, R., Thomas, H., Smith, P., Malcolmson, A., Dore, J., Madan, K., Brown, A., Yovos, J.G., Tsaligopoulos, M., Vogiatzis, N., Baser, M.E., Wallace, A.J. and Evans, D.G. 2004. Constitutional rearrangements of chromosome 22 as a cause of neurofibromatosis 2. J. Med. Genet. 41: 529-534.
- Tempel, W., Tong, Y., Dimov, S., Bochkarev, A. and Park, H. 2008. First crystallographic models of human TBC domains in the context of a family-wide structural analysis. Proteins 71: 497-502.
- Ishibashi, K., Kanno, E., Itoh, T. and Fukuda, M. 2009. Identification and characterization of a novel Tre-2/Bub2/Cdc16 (TBC) protein that possesses Rab3A-GAP activity. Genes Cells 14: 41-52.

CHROMOSOMAL LOCATION

Genetic locus: TBC1D22A (human) mapping to 22q13.3.

SOURCE

TBC1D22A (Q-16) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping within an internal region of TBC1D22A of human origin.

STORAGE

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

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-86902 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

TBC1D22A (Q-16) is recommended for detection of TBC1D22A of 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).

Suitable for use as control antibody for TBC1D22A siRNA (h): sc-76634, TBC1D22A shRNA Plasmid (h): sc-76634-SH and TBC1D22A shRNA (h) Lentiviral Particles: sc-76634-V.

Molecular Weight of TBC1D22A: 59 kDa.

Positive Controls: TBC1D22A (h): 293 Lysate: sc-110612.

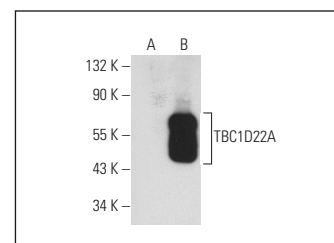
RECOMMENDED SECONDARY REAGENTS

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

DATA



TBC1D22A (Q-16): sc-86902. Western blot analysis of TBC1D22A expression in non-transfected: sc-110760 (A) and human TBC1D22A transfected: sc-110612 (B) 293 whole cell lysates.



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RESEARCH USE

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