SANTA CRUZ BIOTECHNOLOGY, INC.

TBC1D10B (C-14): sc-132111

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. TBC1D10B (TBC1 domain family member 10B), also known as FP2461, is a 533 amino acid protein that contains one Rab-GAP TBC domain, a highly conserved 200 amino acid motif that conveys the the catalytic activity of GTPase-activating proteins. Via its Rab-GAP domain, TBC1D10B is thought to function as a GTPase-activating protein that may regulate the activity of target Rab proteins. TBC1D10B exists as two alternatively spliced isoforms which are encoded by a gene that is located on chromosome 16.

REFERENCES

1. Neuwald, A.F. 1997. A shared domain between a spindle assembly checkpoint protein and Ypt/Rab-specific GTPase-activators. Trends Biochem. Sci. 22: 243-244.
2. Albert, S., Will, E. and Gallwitz, D. 1999. Identification of the catalytic domains and their functionally critical arginine residues of two yeast GTPase-activating proteins specific for Ypt/Rab transport GTPases. EMBO J. 18: 5216-5225.
3. Rak, A., Fedorov, R., Alexandrov, K., Albert, S., Goody, R.S., Gallwitz, D. and Scheidig, A.J. 2000. Crystal structure of the GAP domain of Gyp1p: first insights into interaction with Ypt/Rab proteins. EMBO J. 19: 5105-5113.
4. Beausoleil, S.A., Jedrychowski, M., Schwartz, D., Elias, J.E., Villen, J., Li, J., Cohn, M.A., Cantley, L.C. and Gygi, S.P. 2004. Large-scale characterization of HeLa cell nuclear phosphoproteins. Proc. Natl. Acad. Sci. USA 101: 12130-12135.
5. Choy, K.W., Wang, C.C., Ogura, A., Lau, T.K., Rogers, M.S., Ikeo, K., Gojobori, T., Lam, D.S. and Pang, C.P. 2006. Genomic annotation of 15,809 ESTs identified from pooled early gestation human eyes. Physiol. Genomics 25: 9-15.

CHROMOSOMAL LOCATION

Genetic locus: TBC1D10B (human) mapping to 16p11.2; Tbc1d10b (mouse) mapping to 7 F3.

SOURCE

TBC1D10B (C-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of TBC1D10B 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-132111 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

TBC1D10B (C-14) is recommended for detection of TBC1D10B isoforms 1 and 2 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), immunohistochemistry (including paraffin-embedded sections) (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 TBC1D family members.

TBC1D10B (C-14) is also recommended for detection of TBC1D10B isoforms 1 and 2 in additional species, including canine.

Suitable for use as control antibody for TBC1D10B siRNA (h): sc-93097, TBC1D10B siRNA (m): sc-154088, TBC1D10B shRNA Plasmid (h): sc-93097-SH, TBC1D10B shRNA Plasmid (m): sc-154088-SH, TBC1D10B shRNA (h) Lentiviral Particles: sc-93097-V and TBC1D10B shRNA (m) Lentiviral Particles: sc-154088-V.

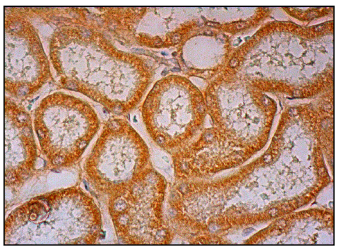
Molecular Weight of TBC1D10B: 61 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227.

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. 3) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

DATA



TBC1D10B (C-14): sc-132111. Immunoperoxidase staining of formalin fixed, paraffin-embedded human kidney tissue showing cytoplasmic staining of cells in tubules.

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.