

TBC1D20 (P-16): sc-85951

BACKGROUND

GTPase-activating proteins (GAPs) accelerate the intrinsic rate of GTP hydrolysis of Ras-related proteins, resulting in downregulation of their active form. TBC1D20 (TBC1 domain family, member 20), also known as FLJ45119 or C20orf140, is a 403 amino acid multi-pass membrane protein that acts as a GTPase-activating protein for Rab family members. TBC1D20 also mediates viral replication and has been identified as a host protein for hepatitis C virus nonstructural protein NS5A (HCV NS5A). HCV NS5A and TBC1D20 directly interact via the N-terminal amphipathic helix of HCV NS5A and C-terminal domain of TBC1D20. TBC1D20 contains one Rab-GAP TBC domain and exists as three isoforms which result due to alternative splicing events. The gene encoding TBC1D20 maps to human chromosome 20, which comprises approximately 2% of the human genome, contains nearly 63 million bases and encodes over 600 genes. Chromosome 20 contains a region with numerous genes which are thought important for seminal production and may be potential targets for male contraception.

REFERENCES

- Lundwall, A. 2007. A locus on chromosome 20 encompassing genes that are highly expressed in the epididymis. *Asian J. Androl.* 9: 540-544.
- Sklan, E.H., Serrano, R.L., Einav, S., Pfeffer, S.R., Lambright, D.G. and Glenn, J.S. 2007. TBC1D20 is a Rab 1 GTPase-activating protein that mediates hepatitis C virus replication. *J. Biol. Chem.* 282: 36354-36361.
- Sklan, E.H., Staschke, K., Oakes, T.M., Elazar, M., Winters, M., Aroeti, B., Danieli, T. and Glenn, J.S. 2007. A Rab-GAP TBC domain protein binds hepatitis C virus NS5A and mediates viral replication. *J. Virol.* 81: 11096-11105.
- O'Rand, M.G., Widgren, E.E., Wang, Z. and Richardson, R.T. 2007. Eppin: an epididymal protease inhibitor and a target for male contraception. *Soc. Reprod. Fertil. Suppl.* 63: 445-453.
- Online Mendelian Inheritance in Man, OMIM™. 2007. Johns Hopkins University, Baltimore, MD. MIM Number: 611663. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
- 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: TBC1D20 (human) mapping to 20p13; Tbc1d20 (mouse) mapping to 2 G3.

SOURCE

TBC1D20 (P-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of TBC1D20 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 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-85951 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

TBC1D20 (P-16) is recommended for detection of TBC1D20 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

TBC1D20 (P-16) is also recommended for detection of TBC1D20 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for TBC1D20 siRNA (h): sc-76633, TBC1D20 siRNA (m): sc-154098, TBC1D20 shRNA Plasmid (h): sc-76633-SH, TBC1D20 shRNA Plasmid (m): sc-154098-SH, TBC1D20 shRNA (h) Lentiviral Particles: sc-76633-V and TBC1D20 shRNA (m) Lentiviral Particles: sc-154098-V.

Molecular Weight of TBC1D20: 46 kDa.

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.

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.



Try **TBC1D20 (F-9): sc-515697**, our highly recommended monoclonal alternative to TBC1D20 (P-16).