

# TULP3 (P-18): sc-23511

## BACKGROUND

Mutations in the mouse *Tub* gene gradually lead to obesity, strongly resembling the late-onset obesity observed in the human population. In addition to excessive deposition of adipose tissue, mice with the *Tub* phenotype also suffer retinal degeneration and neurosensory hearing loss. A human homolog of the *Tub* gene has been identified, as have three related proteins, called Tubby-like protein 1 (TULP1), TULP2 and TULP3. When compared to TULP1 and TULP2, TULP3 has a wider tissue expression and is phylogenetically more similar to *Tub* than either TULP1 or TULP2. TULP1, expressed specifically in the retina, maps to the chromosomal region known to be involved in retinitis pigmentosa, while TULP2 maps within the minimal interval for the rod-cone dystrophy. TULP3 maps to human chromosome 12p13.33, and shares 69% homology to mouse TULP3. Human RNA from testis, ovary, thyroid and spinal cord contain highly detectable levels of TULP3 transcripts. In the retina, TULP3 is expressed specifically in the inner nuclear layer and ganglion cell layer. TULP1, TULP2 and TULP3 may comprise a unique family of bipartite transcription factors.

## REFERENCES

- Ohlemiller, K.K., Hughes, R.M., Mosinger-Ogilvie, J., Speck, J.D., Grosfeld, D.H. and Silverman, M.S. 1995. Cochlear and retinal degeneration in the Tubby mouse. *Neuroreport* 6: 845-849.
- Noben-Trauth, K., Naggert, J.K., North, M.A. and Nishina, P.M. 1996. A candidate gene for the mouse mutation Tubby. *Nature* 380: 534-538.
- North, M.A., Naggert, J.K., Yan, Y., Noben-Trauth, K. and Nishina, P.M. 1997. Molecular characterization of *Tub*, TULP1, and TULP2, members of the novel Tubby gene family and their possible relation to ocular diseases. *Proc. Natl. Acad. Sci. USA* 94: 3128-3133.
- Nishina, P.M., North, M.A., Ikeda, A., Yan, Y. and Naggert, J.K. 1998. Molecular characterization of a novel Tubby gene family member, TULP3, in mouse and humans. *Genomics* 54: 215-220.
- Ikeda, S., He, W., Ikeda, A., Nabbert, J.K., North, M.A. and Nishina, P.M. 1999. Cells-specific expression of tubby gene family members (*Tub*, TULP1, 2, and 3) in the retina. *Invest. Ophthalmol. Vis. Sci.* 40: 2706-2712.
- Boggon, T.J., Shan, W.S., Santagata, S., Myers, S.C. and Shapiro, L. 1999. Implication of Tubby proteins as transcription factors by structure-based functional analysis. *Science* 286: 2119-2125.

## CHROMOSOMAL LOCATION

Genetic locus: TULP3 (human) mapping to 12p13.33; Tulp3 (mouse) mapping to 6 F3.

## SOURCE

TULP3 (P-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of TULP3 of mouse 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-23511 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

TULP3 (P-18) is recommended for detection of TULP3 of mouse, rat and, to a lesser extent, 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).

TULP3 (P-18) is also recommended for detection of TULP3 in additional species, including equine.

Suitable for use as control antibody for TULP3 siRNA (m): sc-77393, TULP3 siRNA (h): sc-77355, TULP3 shRNA Plasmid (m): sc-77393-SH, TULP3 shRNA Plasmid (h): sc-77355-SH, TULP3 shRNA (m) Lentiviral Particles: sc-77393-V and TULP3 shRNA (h) Lentiviral Particles: sc-77355-V.

## 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](http://www.scbt.com) or our catalog for detailed protocols and support products.