TULP1 (h): 293T Lysate: sc-115283



The Power to Question

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, 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., Grosof, D.H. and Silverman, M.S. 1995. Cochlear and retinal degeneration in the tubby mouse. Neuroreport 6: 845-849.
- 2. 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.
- 4. Gu, S., Lennon A., Li Y., Lorenz, B., Fossarello M., North, M., Gal, A. and Wright, A. 1998. Tubby-like protein 1 mutations in autosomal recessive retinitis pigmentosa. Lancet 351: 1103-1104.
- Hagstrom, S.A., North, M.A., Nishina, P.L., Berson, E.L. and Dryja, T.P. 1998. Recessive mutations in the gene encoding the tubby-like protein TULP1 in patients with retinitis pigmentosa. Nat. Genet. 18: 174-176.
- Banerjee, P., Kleyn, P.W., Knowles, J.A., Lewis, C.A., Ross, B.M., Parano, E., Kovats, S.G., Lee, J.J., Penchaszadeh, G.K., Ott, J., Jacobson, S.G. and Gilliam, T.C. 1998. TULP1 mutation in two extended Dominican kindreds with autosomal recessive retinitis pigmentosa. Nat. Genet. 18: 177-179.
- 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.
- 8. Ikeda, S., He, W., Ikeda, A., Nabbert, J.K., North, M.A. and Nishina, P.M. 1999. Cell-specific expression of tubby gene family members (Tub, TULP1, 2, and 3) in the retina. Invest. Opthalmol. Vis. Sci. 40: 2706-2712.
- 9. 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: TULP1 (human) mapping to 6p21.31.

PRODUCT

TULP1 (h): 293T Lysate represents a lysate of human TULP1 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

APPLICATIONS

TULP1 (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive TULP1 antibodies. Recommended use: 10-20 µl per lane.

Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

Santa Cruz Biotechnology, Inc. 1.800.457.3801 831.457.3801 Fax 831.457.3801 Europe +00800 4573 8000 49 6221 4503 0 www.scbt.com