



THOC6 (h): 293T Lysate: sc-116264

BACKGROUND

WD-repeats are motifs that are found in a variety of proteins and are characterized by a conserved core of 40-60 amino acids that commonly form a tertiary propeller structure. While proteins that contain WD-repeats participate in a wide range of cellular functions, they are generally involved in regulatory mechanisms concerning chromatin assembly, cell cycle control, signal transduction, RNA processing, apoptosis and vesicular trafficking. THOC6 (THO complex 6 homolog), also known as WDR58 (WD-repeat-containing protein 58) is a 341 amino acid protein that contains seven WD-repeats and belongs to the WD-repeat THOC6 family. THOC6 is a component of the THO/TREX complex that is recruited to transcribed genes and travels along with RNA polymerase II (Pol II) during elongation, coupling elongating Pol II with RNA splicing and export factors. Multiple isoforms of THOC6 exist due to alternative splicing events.

REFERENCES

1. van der Voorn, L. and Ploegh, H.L. 1992. The WD-40 repeat. *FEBS Lett.* 307: 131-134.
2. Neer, E.J., Schmidt, C.J., Nambudripad, R. and Smith, T.F. 1994. The ancient regulatory-protein family of WD-repeat proteins. *Nature* 371: 297-300.
3. Garcia-Higuera, I., Fenoglio, J., Li, Y., Lewis, C., Panchenko, M.P., Reiner, O., Smith, T.F. and Neer, E.J. 1996. Folding of proteins with WD-repeats: comparison of six members of the WD-repeat superfamily to the G protein β subunit. *Biochemistry* 35: 13985-13994.
4. Garcia-Higuera, I., Gaitatzes, C., Smith, T.F. and Neer, E.J. 1998. Folding a WD repeat propeller. Role of highly conserved aspartic acid residues in the G protein β subunit and Sec13. *J. Biol. Chem.* 273: 9041-9049.
5. Smith, T.F., Gaitatzes, C., Saxena, K. and Neer, E.J. 1999. The WD repeat: a common architecture for diverse functions. *Trends Biochem. Sci.* 24: 181-185.
6. Li, D. and Roberts, R. 2001. WD-repeat proteins: structure characteristics, biological function and their involvement in human diseases. *Cell. Mol. Life Sci.* 58: 2085-2097.
7. Strässer, K., Masuda, S., Mason, P., Pfannstiel, J., Oppizzi, M., Rodriguez-Navarro, S., Rondón, A.G., Aguilera, A., Struhl, K., Reed, R. and Hurt, E. 2002. TREX is a conserved complex coupling transcription with messenger RNA export. *Nature* 417: 304-308.
8. Rehwinkel, J., Herold, A., Gari, K., Köcher, T., Rode, M., Ciccarelli, F.L., Wilm, M. and Izaurralde, E. 2004. Genome-wide analysis of mRNAs regulated by the THO complex in *Drosophila melanogaster*. *Nat. Struct. Mol. Biol.* 11: 558-566.
9. Masuda, S., Das, R., Cheng, H., Hurt, E., Dorman, N. and Reed, R. 2005. Recruitment of the human TREX complex to mRNA during splicing. *Genes Dev.* 19: 1512-1517.

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.

CHROMOSOMAL LOCATION

Genetic locus: THOC6 (human) mapping to 16p13.3.

PRODUCT

THOC6 (h): 293T Lysate represents a lysate of human THOC6 transfected 293T cells and is provided as 100 μ g protein in 200 μ l SDS-PAGE buffer.

APPLICATIONS

THOC6 (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive THOC6 antibodies. Recommended use: 10-20 μ l per lane.

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

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.