

TCP-1 θ (N-18): sc-13891

BACKGROUND

The protein TCP-1 (t complex polypeptide 1) is a subunit of the hetero-oligomeric complex CCT (chaperonin containing TCP-1) present in the eukaryotic cytosol. The CCT of eukaryotic cytosol is composed of eight different subunit species, TCP-1 α , β , γ , δ , ϵ , ζ , η and θ , each encoded by a different gene. Two ζ subunits have been described: TCP-1 ζ (also designated TCP-1 ζ 1) and TCP-1 ζ 2. TCP-1 subunits are proposed to have independent functions in folding its *in vivo* substrates, the actins and tubulins. TCP-1 was first identified in the mouse as relevant for tail-less and embryonic lethal phenotypes. Sequences homologous to TCP-1 have been isolated in several other species, and the yeast TCP-1 has been shown to encode a molecular chaperone for Actin and Tubulin. TCP-1 found in mammalian cells and yeast plays an important role in the folding of cytosolic proteins.

CHROMOSOMAL LOCATION

Genetic locus: CCT8 (human) mapping to 21q21.3; Cct8 (mouse) mapping to 16 C3.3.

SOURCE

TCP-1 θ (N-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of TCP-1 θ of human origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-13891 P, (100 μ g 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

TCP-1 θ (N-18) is recommended for detection of TCP-1 θ of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], 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).

TCP-1 θ (N-18) is also recommended for detection of TCP-1 θ in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for TCP-1 θ siRNA (h): sc-43451, TCP-1 θ siRNA (m): sc-43452, TCP-1 θ shRNA Plasmid (h): sc-43451-SH, TCP-1 θ shRNA Plasmid (m): sc-43452-SH, TCP-1 θ shRNA (h) Lentiviral Particles: sc-43451-V and TCP-1 θ shRNA (m) Lentiviral Particles: sc-43452-V.

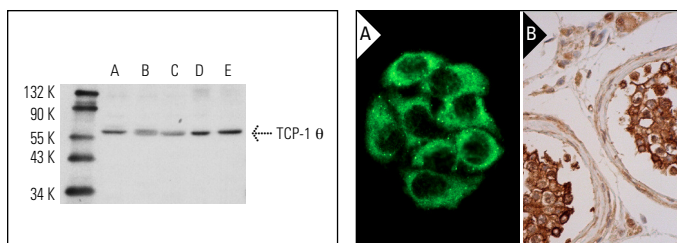
Molecular Weight of TCP-1 θ : 52-65 kDa.

Positive Controls: mouse testis extract: sc-2405, F9 cell lysate: sc-2245 or rat testis extract: sc-2400.

RESEARCH USE

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

DATA



TCP-1 θ (N-18): sc-13891. Western blot analysis of TCP-1 θ expression in F9 (A), HeLa (B) and Jurkat (C) whole cell lysates and rat (D) and mouse (E) testis extracts

TCP-1 θ (N-18): sc-13891. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human testis tissue showing cytoplasmic, membrane and nuclear staining of cells in seminiferous ducts and cytoplasmic and nuclear staining of Leydig cells (B).

SELECT PRODUCT CITATIONS

- Kunisawa, J., et al. 2003. The group II chaperonin TRiC protects proteolytic intermediates from degradation in the MHC class I antigen processing pathway. *Mol. Cell* 12: 565-576.
- Zhu, Y.F., et al. 2006. Proteomic analysis of effect of hyperthermia on spermatogenesis in adult male mice. *J. Proteome Res.* 5: 2217-2225.
- Fu, D., et al. 2010. Human AlkB homolog ABH8 is a tRNA methyltransferase required for wobble uridine modification and DNA damage survival. *Mol. Cell. Biol.* 30: 2449-2459.
- Dun, M.D., et al. 2011. The chaperonin containing TCP1 complex (CCT/TRiC) is involved in mediating sperm-oocyte interaction. *J. Biol. Chem.* 286: 36875-36887.
- Sergeeva, O.A., et al. 2013. Human CCT4 and CCT5 chaperonin subunits expressed in *Escherichia coli* form biologically active homo-oligomers. *J. Biol. Chem.* 288: 17734-17744.
- Knee, K.M., et al. 2013. Human TRiC complex purified from HeLa cells contains all eight CCT subunits and is active *in vitro*. *Cell Stress Chaperones* 18: 137-144.

PROTOCOLS

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



Try **TCP-1 θ (E-7): sc-377261** or **TCP-1 θ (E-1): sc-377453**, our highly recommended monoclonal alternatives to TCP-1 θ (N-18).