

TCP-1 γ (H-300): sc-33145

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.

REFERENCES

- Ahnert, V., et al. 1996. Cucumber T-complex protein. Molecular cloning, bacterial expression and characterization within a 22-S cytosolic complex in cotyledons and hypocotyls. *Eur. J. Biochem.* 235: 114-119.
- Iijima, M., et al. 1998. A *Dictyostelium discoideum* homologue to TCP-1 is essential for growth and development. *Gene* 213: 101-106.

CHROMOSOMAL LOCATION

Genetic locus: CCT3 (human) mapping to 1q22; Cct3 (mouse) mapping to 3 F1.

SOURCE

TCP-1 γ (H-300) is a rabbit polyclonal antibody raised against amino acids 101-400 mapping within an internal region of TCP-1 γ 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.

APPLICATIONS

TCP-1 γ (H-300) is recommended for detection of TCP-1 γ 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

TCP-1 γ (H-300) is also recommended for detection of TCP-1 γ in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for TCP-1 γ siRNA (h): sc-36623, TCP-1 γ siRNA (m): sc-36624, TCP-1 γ shRNA Plasmid (h): sc-36623-SH, TCP-1 γ shRNA Plasmid (m): sc-36624-SH, TCP-1 γ shRNA (h) Lentiviral Particles: sc-36623-V and TCP-1 γ shRNA (m) Lentiviral Particles: sc-36624-V.

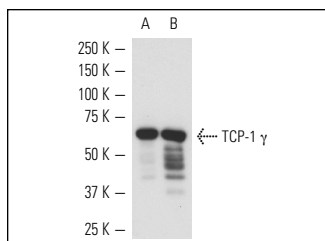
Molecular Weight of TCP-1 γ : 57 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, rat testis extract: sc-2400 or mouse testis extract: sc-2405.

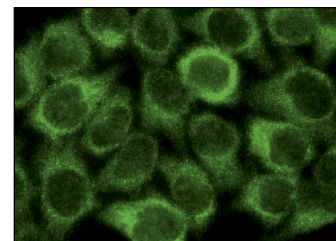
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker[™] compatible goat anti-rabbit IgG-HRP: sc-2030 (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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz[™] Mounting Medium: sc-24941.

DATA



TCP-1 γ (H-300): sc-33145. Western blot analysis of TCP-1 γ expression in mouse testis (A) and rat testis (B) tissue extracts.



TCP-1 γ (H-300): sc-33145. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization.

SELECT PRODUCT CITATIONS

- 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.
- Zhang, J., et al. 2013. Cellular chaperonin CCT γ contributes to rabies virus replication during infection. *J. Virol.* 87: 7608-7621.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

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



Try **TCP-1 γ (F-3): sc-271336**, our highly recommended monoclonal alternative to TCP-1 γ (H-300).