

# TCP-1 $\gamma$ (C-17): sc-13878

## 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  $\alpha$ ,  $\beta$ ,  $\gamma$ ,  $\delta$ ,  $\epsilon$ ,  $\zeta$ ,  $\eta$  and  $\theta$ , each encoded by a different gene. Two  $\zeta$  subunits have been described: TCP-1  $\zeta$  (also designated TCP-1  $\zeta$ 1) and TCP-1  $\zeta$ 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  $\gamma$  (C-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of TCP-1  $\gamma$  of human origin.

## PRODUCT

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

Blocking peptide available for competition studies, sc-13878 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

TCP-1  $\gamma$  (C-17) is recommended for detection of TCP-1  $\gamma$  of mouse, rat and 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 immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

TCP-1  $\gamma$  (C-17) is also recommended for detection of TCP-1  $\gamma$  in additional species, including equine, canine, bovine and porcine.

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

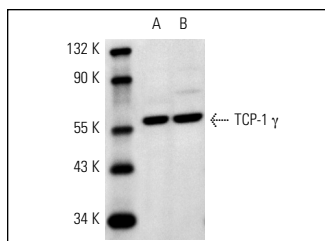
Molecular Weight of TCP-1  $\gamma$ : 57 kDa.

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

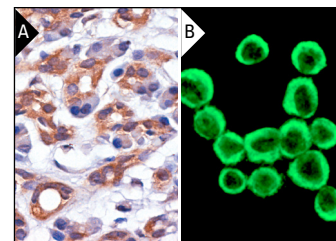
## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use 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. 3) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

## DATA



TCP-1  $\gamma$  (C-17): sc-13878. Western blot analysis of TCP-1  $\gamma$  expression in mouse testis (A) and rat testis (B) extracts.



TCP-1  $\gamma$  (C-17): sc-13878. Immunoperoxidase staining of formalin-fixed, paraffin-embedded human pancreas (A) and immunofluorescence staining of methanol-fixed HeLa cells (B) showing cytoplasmic localization.

## 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.
- Lee, S.C. and Chan, J. 2012. Proteomic identification of chaperonin-containing tail-less complex polypeptide-1  $\gamma$  subunit as a p53-responsive protein in colon cancer cells. *Cancer Genomics Proteomics* 9: 101-108.

## 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.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.



Try **TCP-1  $\gamma$  (F-3): sc-271336**, our highly recommended monoclonal alternative to TCP-1  $\gamma$  (C-17).