

# TCP-1 $\beta$ (H-80): sc-28556

## 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 that 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: CCT2 (human) mapping to 12q15; Cct2 (mouse) mapping to 10 D2.

## SOURCE

TCP-1  $\beta$  (H-80) is a rabbit polyclonal antibody raised against amino acids 456-535 mapping at the C-terminus of TCP-1  $\beta$  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.

## APPLICATIONS

TCP-1  $\beta$  (H-80) is recommended for detection of TCP-1  $\beta$  of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ 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  $\beta$  (H-80) is also recommended for detection of TCP-1  $\beta$  in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for TCP-1  $\beta$  siRNA (h): sc-36622, TCP-1  $\beta$  siRNA (m): sc-36625, TCP-1  $\beta$  shRNA Plasmid (h): sc-36622-SH, TCP-1  $\beta$  shRNA Plasmid (m): sc-36625-SH, TCP-1  $\beta$  shRNA (h) Lentiviral Particles: sc-36622-V and TCP-1  $\beta$  shRNA (m) Lentiviral Particles: sc-36625-V.

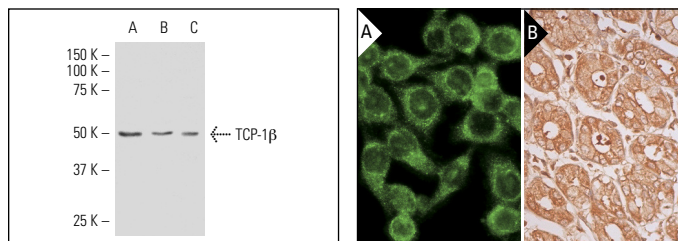
Molecular Weight of TCP-1  $\beta$ : 50 kDa.

Positive Controls: mouse testis extract: sc-2405, HeLa whole cell lysate: sc-2200 or ZR-75-1 cell lysate: sc-2241.

## STORAGE

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

## DATA



TCP-1 $\beta$  (H-80): 28556. Western blot analysis of TCP-1 $\beta$  expression in mouse testis tissue extract (A) and HeLa (B) and ZR-75-1 (C) whole cell lysates.

TCP-1  $\beta$  (H-80): sc-28556. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human lower stomach tissue showing cytoplasmic and membrane staining of glandular cells (B).

## SELECT PRODUCT CITATIONS

- Hamelin, C., et al. 2011. Identification and verification of heat shock protein 60 as a potential serum marker for colorectal cancer. *FEBS J.* 278: 4845-4859.
- 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.

## 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  $\beta$  (D-8): sc-374152** or **TCP-1  $\beta$  (D-5): sc-374153**, our highly recommended monoclonal alternatives to TCP-1  $\beta$  (H-80).