

# TCP-1 $\alpha$ (P-15): sc-13869

## 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.

## CHROMOSOMAL LOCATION

Genetic locus: TCP1 (human) mapping to 6q25.3; Tcp1 (mouse) mapping to 17 A1.

## SOURCE

TCP-1  $\alpha$  (P-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of TCP-1  $\alpha$  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-13869 P, (100  $\mu$ 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  $\alpha$  (P-15) is recommended for detection of TCP-1  $\alpha$  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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

TCP-1  $\alpha$  (P-15) is also recommended for detection of TCP-1  $\alpha$  in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for TCP-1  $\alpha$  siRNA (h): sc-36620, TCP-1  $\alpha$  siRNA (m): sc-36621, TCP-1  $\alpha$  shRNA Plasmid (h): sc-36620-SH, TCP-1  $\alpha$  shRNA Plasmid (m): sc-36621-SH, TCP-1  $\alpha$  shRNA (h) Lentiviral Particles: sc-36620-V and TCP-1  $\alpha$  shRNA (m) Lentiviral Particles: sc-36621-V.

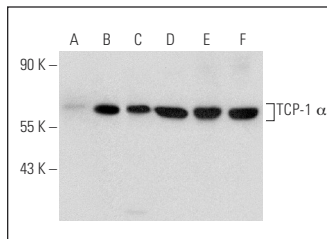
Molecular Weight of TCP-1  $\alpha$ : 60 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, mouse testis extract: sc-2405 or TCP-1  $\alpha$  (m): 293T Lysate: sc-123956.

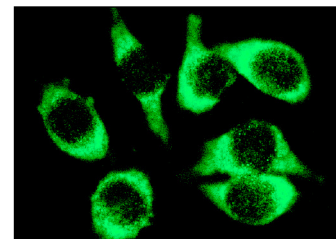
## RECOMMENDED SECONDARY REAGENTS

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

## DATA



TCP-1  $\alpha$  (P-15): sc-13869. Western blot analysis of TCP-1  $\alpha$  expression in non-transfected 293T: sc-117752 (A), mouse TCP-1  $\alpha$  transfected 293T: sc-123956 (B), HeLa (C) and F9 (D) whole cell lysates and rat testis (E) and mouse testis (F) tissue extracts.



TCP-1  $\alpha$  (P-15): sc-13869. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic staining.

## SELECT PRODUCT CITATIONS

- Ciccosanti, F., et al. 2010. Proteomic analysis identifies prohibitin down-regulation as a crucial event in the mitochondrial damage observed in HIV-infected patients. *Antivir. Ther.* 15: 377-390.
- 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.

## 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.


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Try **TCP-1  $\alpha$  (91A): sc-53454** or **TCP-1  $\alpha$  (B-3): sc-374088**, our highly recommended monoclonal alternatives to TCP-1  $\alpha$  (P-15).