

TCP-1 α (23c): sc-53452

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

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3. Yokota, S.I., et al. 2000. Upregulation of cytosolic chaperonin CCT subunits during recovery from chemical stress that causes accumulation of unfolded proteins. *Eur. J. Biochem.* 267: 1658-1664.
4. Hynes, G.M., et al. 2000. Individual subunits of the eukaryotic cytosolic chaperonin mediate interactions with binding sites located on subdomains of β -actin. *J. Biol. Chem.* 275: 18985-18994.
5. Ritco-Vonsovici, M., et al. 2000. Defining the eukaryotic cytosolic chaperonin-binding sites in human tubulins. *J. Mol. Biol.* 304: 81-98.
6. Campos, E.G. and Hamdan, F.F. 2000. Cloning of the chaperonin t complex polypeptide 1 gene from *Schistosoma mansoni* and studies of its expression levels under heat shock and oxidative stress. *Parasitol. Res.* 86: 253-258.

CHROMOSOMAL LOCATION

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

SOURCE

TCP-1 α (23c) is a rat monoclonal antibody raised against the C-terminal half of full length TCP of murine origin.

PRODUCT

Each vial contains 200 μ g IgG_{2c} in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

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

APPLICATIONS

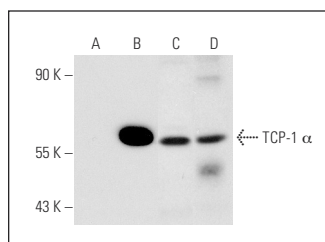
TCP-1 α (23c) is recommended for detection of TCP-1 α of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

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

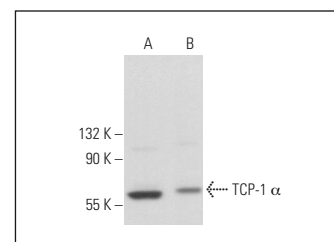
Molecular Weight of TCP-1 α : 60 kDa.

Positive Controls: TCP-1 α (m): 293T Lysate: sc-123956, F9 cell lysate: sc-2245 or mouse testis extract: sc-2405.

DATA



TCP-1 α (23c): sc-53452. Western blot analysis of TCP-1 α expression in non-transfected 293T: sc-117752 (A), mouse TCP-1 α transfected 293T: sc-123956 (B) and F9 (C) whole cell lysates and mouse testis tissue extract (D).



TCP-1 α (23c): sc-53452. Western blot analysis of TCP-1 α expression in F9 (A) and BYDP (B) whole cell lysates.

RESEARCH USE

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

PROTOCOLS

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