

TCP-1 β (D-8): sc-374152

BACKGROUND

The protein TCP-1 (t complex polypeptide 1) is a subunit of the heterooligomeric 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 ξ 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.

CHROMOSOMAL LOCATION

Genetic locus: CCT2 (human) mapping to 12q15; Cct2 (mouse) mapping to 10 D2.

SOURCE

TCP-1 β (D-8) is a mouse monoclonal antibody raised against amino acids 456-535 mapping at the C-terminus of TCP-1 β of human origin.

PRODUCT

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

TCP-1 β (D-8) is available conjugated to agarose (sc-374152 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-374152 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-374152 PE), fluorescein (sc-374152 FITC), Alexa Fluor® 488 (sc-374152 AF488), Alexa Fluor® 546 (sc-374152 AF546), Alexa Fluor® 594 (sc-374152 AF594) or Alexa Fluor® 647 (sc-374152 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-374152 AF680) or Alexa Fluor® 790 (sc-374152 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

TCP-1 β (D-8) is recommended for detection of TCP-1 β of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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), 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).

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

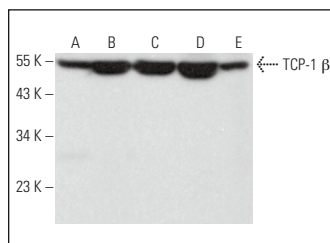
Molecular Weight of TCP-1 β : 50 kDa.

Positive Controls: SK-BR-3 cell lysate: sc-2218, NIH/3T3 whole cell lysate: sc-2210 or ZR-75-1 cell lysate: sc-2241.

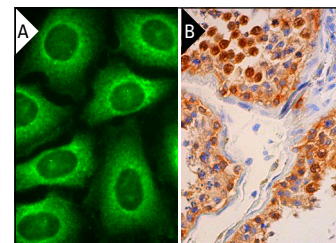
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgG κ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



TCP-1 β (D-8): sc-374152. Western blot analysis of TCP-1 β expression in ZR-75-1 (A), SK-BR-3 (B) and NIH/3T3 (C) whole cell lysates and human testis (D) and rat breast (E) tissue extracts.



TCP-1 β (D-8): sc-374152. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human testis tissue showing cytoplasmic and nuclear staining of cells in seminiferous ducts (B).

SELECT PRODUCT CITATIONS

- Bugnon Valdano, M., et al. 2021. Human papillomavirus infection requires the CCT chaperonin complex. *J. Virol.* 95: e01943-20.
- Wang, J.Z., et al. 2022. Up-regulated YB-1 protein promotes glioblastoma growth through an YB-1/CCT4/mLST8/mTOR pathway. *J. Clin. Invest.* 132: e146536.
- Suarez-Artiles, L., et al. 2022. Pan-claudin family interactome analysis reveals shared and specific interactions. *Cell Rep.* 41: 111588.
- Yu, T., et al. 2023. THOC3 interacts with YBX1 to promote lung squamous cell carcinoma progression through PFKFB4 mRNA modification. *Cell Death Dis.* 14: 475.
- Papaccio, F., et al. 2023. "Proteotranscriptomic analysis of advanced colorectal cancer patient derived organoids for drug sensitivity prediction". *J. Exp. Clin. Cancer Res.* 42: 8.

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.

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