SANTA CRUZ BIOTECHNOLOGY, INC.

TCP-1 ε (G-3): sc-376188

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 ζ1) and TCP-1 ζ2. 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 tailless 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: CCT5 (human) mapping to 5p15.2; Cct5 (mouse) mapping to 15 B2.

SOURCE

TCP-1 ε (G-3) is a mouse monoclonal antibody raised against amino acids 111-390 mapping within an internal region of TCP-1 ε of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

TCP-1 ε (G-3) is available conjugated to agarose (sc-376188 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-376188 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-376188 PE), fluorescein (sc-376188 FITC), Alexa Fluor® 488 (sc-376188 AF488), Alexa Fluor® 546 (sc-376188 AF546), Alexa Fluor® 594 (sc-376188 AF594) or Alexa Fluor® 647 (sc-376188 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-376188 AF680) or Alexa Fluor® 790 (sc-376188 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

TCP-1 ε (G-3) is recommended for detection of TCP-1 ε of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg 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 ε siRNA (h): sc-43447, TCP-1 ε siRNA (m): sc-43448, TCP-1 ε shRNA Plasmid (h): sc-43447-SH, TCP-1 ε shRNA Plasmid (m): sc-43448-SH, TCP-1 ε shRNA (h) Lentiviral Particles: sc-43447-V and TCP-1 ε shRNA (m) Lentiviral Particles: sc-43448-V.

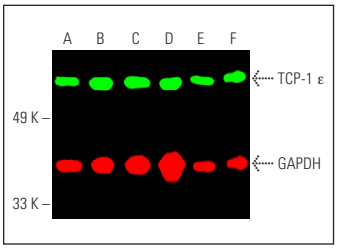
Molecular Weight of TCP-1 ε: 60 kDa.

Positive Controls: BYDP whole cell lysate: sc-364368, F9 cell lysate: sc-2245 or HeLa whole cell lysate: sc-2200.

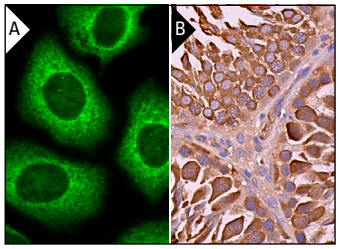
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ 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-IgGκ BP-FITC: sc-516140 or m-IgGκ 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-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



Simultaneous direct near-infrared western blot analysis of TCP-1 ε expression, detected with TCP-1 ε (G-3) Alexa Fluor® 680: sc-376188 AF680 and GAPDH expression, detected with GAPDH (G-9) Alexa Fluor® 790: sc-365062 AF790 in Caki-1 (**A**), HeLa (**B**), MOLT-4 (**C**), Jurkat (**D**), F9 (**E**) and BYDP (**F**) whole cell lysates. Blocked with UltraCruz® Blocking Reagent: sc-516214.



TCP-1 ε (G-3): sc-376188. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded rat testis tissue showing cytoplasmic staining of cells in seminiferous ducts (**B**).

SELECT PRODUCT CITATIONS

1. McClatchy, D.B., et al. 2020. Quantitative analysis of global protein stability rates in tissues. Sci. Rep. 10: 15983.

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 for detailed protocols and support products.