

TCP-1 η (A-8): sc-271951

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

- 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: CCT7 (human) mapping to 2p13.2; Cct7 (mouse) mapping to 6 C3.

SOURCE

TCP-1 η (A-8) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 474-512 near the C-terminus of TCP-1 η of human origin.

PRODUCT

Each vial contains 200 μ g IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

TCP-1 η (A-8) is available conjugated to agarose (sc-271951 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-271951 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-271951 PE), fluorescein (sc-271951 FITC), Alexa Fluor[®] 488 (sc-271951 AF488), Alexa Fluor[®] 546 (sc-271951 AF546), Alexa Fluor[®] 594 (sc-271951 AF594) or Alexa Fluor[®] 647 (sc-271951 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-271951 AF680) or Alexa Fluor[®] 790 (sc-271951 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-271951 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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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 η (A-8) is recommended for detection of TCP-1 η 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000). TCP-1 η (A-8) is also recommended for detection of TCP-1 η in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for TCP-1 η siRNA (h): sc-43449, TCP-1 η siRNA (m): sc-43450, TCP-1 η shRNA Plasmid (h): sc-43449-SH, TCP-1 η shRNA Plasmid (m): sc-43450-SH, TCP-1 η shRNA (h) Lentiviral Particles: sc-43449-V and TCP-1 η shRNA (m) Lentiviral Particles: sc-43450-V.

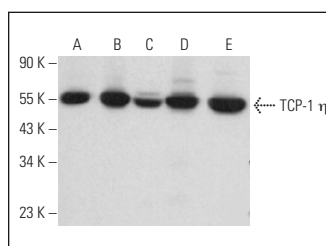
Molecular Weight of TCP-1 η : 58 kDa.

Positive Controls: NIH/3T3 whole cell lysate: sc-2210, HEL 92.1.7 cell lysate: sc-2270 or AMJ2-C8 whole cell lysate: sc-364366.

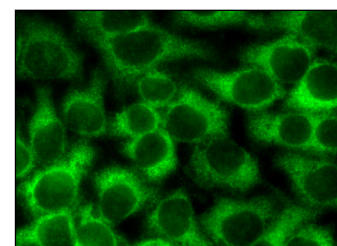
RECOMMENDED SUPPORT REAGENTS

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.

DATA



TCP-1 η (A-8): sc-271951. Western blot analysis of TCP-1 η expression in NIH/3T3 (A), HEL 92.1.7 (B), AMJ2-C8 (C), SW480 (D) and Raji (E) whole cell lysates.



TCP-1 η (A-8): sc-271951. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization.

SELECT PRODUCT CITATIONS

- Vonk, W.I.M., et al. 2020. Differentiation drives widespread rewiring of the neural stem cell chaperone network. *Mol. Cell* 78: 329-345.e9.
- Collier, M.P., et al. 2021. Native mass spectrometry analyses of chaperonin complex TRiC/CCT reveal subunit N-terminal processing and re-association patterns. *Sci. Rep.* 11: 13084.

RESEARCH USE

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