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- Expressversand

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# TCP-1 $\zeta$ (m2): 293T Lysate: sc-123959

## 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  $\alpha$ ,  $\beta$ ,  $\gamma$ ,  $\delta$ ,  $\epsilon$ ,  $\zeta$ ,  $\eta$  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.

## REFERENCES

1. Ahnert, V., May, C., Gerke, R. and Kindl, H. 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.
2. Iijima, M., Shimizu, H., Tanaka, Y. and Urushihara, H. 1998. A *Dictyostelium discoideum* homologue to TCP-1 is essential for growth and development. *Gene* 213: 101-106.
3. Ritco-Vonsovici, M. and Willison, K.R. 2000. Defining the eukaryotic cytosolic chaperonin-binding sites in human tubulins. *J. Mol. Biol.* 304: 81-98.
4. Hynes, G.M. and Willison, K.R. 2000. Individual subunits of the eukaryotic cytosolic chaperonin mediate interactions with binding sites located on subdomains of  $\beta$ -Actin. *J. Biol. Chem.* 275: 18985-18994.
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6. Yokota, S.I., Yanagi, H., Yura, T. and Kubota, H. 2000. Upregulation of cytosolic chaperonin CCT subunits during recovery from chemical stress that causes accumulation of unfolded proteins. *Eur. J. Biochem.* 267: 1658-1664.

## CHROMOSOMAL LOCATION

Genetic locus: Cct6a (mouse) mapping to 5 G1.3.

## PRODUCT

TCP-1  $\zeta$  (m2): 293T Lysate represents a lysate of mouse TCP-1  $\zeta$  transfected 293T cells and is provided as 100  $\mu$ g protein in 200  $\mu$ l SDS-PAGE buffer.

## STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

## RESEARCH USE

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

## APPLICATIONS

TCP-1  $\zeta$  (m2): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive TCP-1  $\zeta$  antibodies. Recommended use: 10-20  $\mu$ l per lane.

Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

## PROTOCOLS

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