

TBCC (E-14): sc-109074

BACKGROUND

Microtubules, the primary component of the cytoskeletal network, are highly dynamic structures composed of α/β Tubulin heterodimers. Biosynthesis of functional microtubules involve the participation of several chaperones, termed tubulin folding cofactors A (TBCA), D (TBCD), E (TBCE) and C (TBCC), that act on folding intermediates downstream of the cytosolic chaperonin, alternatively named TCP. TBCC (Tubulin-specific chaperone C), also known as β Tubulin-folding cofactor C or CFC, is a 346 amino acid protein belonging to the TBCD family. Interaction with TBCC causes the release of tubulin polypeptides that are committed to the native state. TBCC shares significant homology with X-linked retinitis pigmentosa 2 gene RP2, in which mutations cause the progressive degeneration of photoreceptor cells.

REFERENCES

1. Tian, G., et al. 1996. Pathway leading to correctly folded β Tubulin. *Cell* 86: 287-296.
2. Bartolini, F., et al. 2002. Functional overlap between retinitis pigmentosa 2 protein and the tubulin-specific chaperone cofactor C. *J. Biol. Chem.* 277: 14629-14634.
3. Grynberg, M., et al. 2003. Domain analysis of the tubulin cofactor system: a model for tubulin folding and dimerization. *BMC Bioinformatics.* 4: 46.
4. Tian, G., et al. 2006. Cryptic out-of-frame translational initiation of TBCE rescues tubulin formation in compound heterozygous HRD. *Proc. Natl. Acad. Sci. USA* 103: 13491-13496.
5. Kortazar, D., et al. 2007. Role of cofactors B (TBCB) and E (TBCE) in tubulin heterodimer dissociation. *Exp. Cell Res.* 313: 425-436.
6. Cunningham, L.A. and Kahn, R.A. 2008. Cofactor D functions as a centrosomal protein and is required for the recruitment of the γ Tubulin ring complex at centrosomes and organization of the mitotic spindle. *J. Biol. Chem.* 283: 7155-7165.

CHROMOSOMAL LOCATION

Genetic locus: TBCC (human) mapping to 6p21.1; Tbcc (mouse) mapping to 17 C.

SOURCE

TBCC (E-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of TBCC of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-109074 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

TBCC (E-14) is recommended for detection of TBCC 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).

TBCC (E-14) is also recommended for detection of TBCC in additional species, including equine, canine and bovine.

Suitable for use as control antibody for TBCC siRNA (h): sc-95496, TBCC siRNA (m): sc-154115, TBCC shRNA Plasmid (h): sc-95496-SH, TBCC shRNA Plasmid (m): sc-154115-SH, TBCC shRNA (h) Lentiviral Particles: sc-95496-V and TBCC shRNA (m) Lentiviral Particles: sc-154115-V.

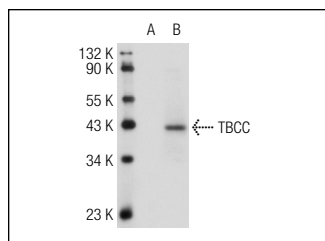
Molecular Weight of TBCC: 39 kDa.

Positive Controls: TBCC (m2): 293T Lysate: sc-123939.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



TBCC (E-14): sc-109074. Western blot analysis of TBCC expression in non-transfected: sc-117752 (A) and mouse TBCC transfected: sc-123939 (B) 293T whole cell lysates.

RESEARCH USE

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

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Try **TBCC (G-10): sc-390635** or **TBCC (H-5): sc-374587**, our highly recommended monoclonal alternatives to TBCC (E-14).