

TBCA (C-2): sc-398262

BACKGROUND

TBCA (Tubulin-specific chaperone A), also known as Tubulin-folding cofactor A, is a 108 amino acid cytoplasmic protein that belongs to the TBCA family. As a Tubulin-folding protein, TBCA is involved in the early step of the Tubulin folding pathway. The Tubulin-folding supercomplex is made up of cofactors A to E. Cofactors A and D function by capturing and stabilizing Tubulin in a quasi-native conformation, which is then followed by cofactor E binding to the cofactor D-Tubulin complex. Interaction with cofactor C then causes the release of Tubulin polypeptides that are committed to the native state. The gene that encodes TBCA consists of nearly 178,000 bases and maps to human chromosome 5q14.1. With 181 million base pairs encoding around 1,000 genes, chromosome 5 makes up about 6% of human genomic DNA. Deletion of the p arm of chromosome 5 leads to Cri du chat syndrome and deletion of 5q or chromosome 5 altogether is common in therapy-related acute myelogenous leukemias and myelodysplastic syndrome.

REFERENCES

1. Tian, G., et al. 1996. Pathway leading to correctly folded β -Tubulin. *Cell* 86: 287-296.
2. Lewis, S.A., et al. 1996. Chaperonin-mediated folding of Actin and Tubulin. *J. Cell Biol.* 132: 1-4.
3. Guasch, A., et al. 2002. Three-dimensional structure of human Tubulin chaperone cofactor A. *J. Mol. Biol.* 318: 1139-1149.
4. Nolasco, S., et al. 2005. Tubulin cofactor A gene silencing in mammalian cells induces changes in microtubule cytoskeleton, cell cycle arrest and cell death. *FEBS Lett.* 579: 3515-3524.
5. Online Mendelian Inheritance in Man, OMIM™. 2006. Johns Hopkins University, Baltimore, MD. MIM Number: 610058. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>

CHROMOSOMAL LOCATION

Genetic locus: TBCA (human) mapping to 5q14.1; TbcA (mouse) mapping to 13 D1.

SOURCE

TBCA (C-2) is a mouse monoclonal antibody raised against amino acids 1-108 representing full length TBCA 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.

TBCA (C-2) is available conjugated to agarose (sc-398262 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-398262 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-398262 PE), fluorescein (sc-398262 FITC), Alexa Fluor® 488 (sc-398262 AF488), Alexa Fluor® 546 (sc-398262 AF546), Alexa Fluor® 594 (sc-398262 AF594) or Alexa Fluor® 647 (sc-398262 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-398262 AF680) or Alexa Fluor® 790 (sc-398262 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

TBCA (C-2) is recommended for detection of TBCA 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).

Suitable for use as control antibody for TBCA siRNA (h): sc-91635, TBCA siRNA (m): sc-154113, TBCA shRNA Plasmid (h): sc-91635-SH, TBCA shRNA Plasmid (m): sc-154113-SH, TBCA shRNA (h) Lentiviral Particles: sc-91635-V and TBCA shRNA (m) Lentiviral Particles: sc-154113-V.

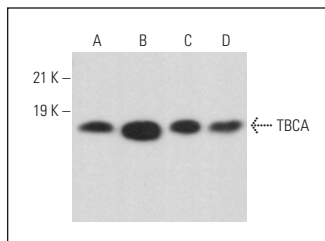
Molecular Weight of TBCA: 13 kDa.

Positive Controls: TBCA (h): 293T Lysate: sc-113020, LNCaP cell lysate: sc-2231 or HeLa whole cell lysate: sc-2200.

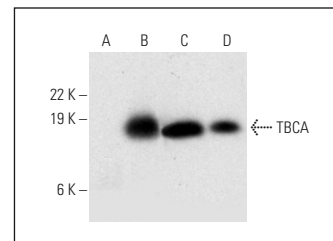
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-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



TBCA (C-2): sc-398262. Western blot analysis of TBCA expression in HeLa (A), CCRF-CEM (B) and KNRK (C) whole cell lysates and rat testis tissue extract (D).



TBCA (C-2): sc-398262. Western blot analysis of TBCA expression in non-transfected 293T: sc-117752 (A), human TBCA transfected 293T: sc-113020 (B), LNCaP (C) and HeLa (D) whole cell lysates.

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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