

# TBCA (Y-13): sc-107101

## 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., Huang, Y., Rommelaere, H., Vandekerckhove, J., Ampe, C. and Cowan, N.J. 1996. Pathway leading to correctly folded  $\beta$ -tubulin. *Cell*. 86: 287-296.
2. Lewis, S.A., Tian, G., Vainberg, I.E. and Cowan, N.J. 1996. Chaperonin-mediated folding of actin and tubulin. *J. Cell Biol.* 132: 1-4.
3. Guasch, A., Aloria, K., Perez, R., Avila, J., Zabala, J.C. and Coll, M. 2002. Three-dimensional structure of human tubulin chaperone cofactor A. *J. Mol. Biol.* 318: 1139-1149.
4. Nolasco, S., Bellido, J., Gonçalves, J., Zabala, J.C. and Soares, H. 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<sup>™</sup>. 2006. Johns Hopkins University, Baltimore, MD. MIM Number: 610058. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
6. Vera-Carbonell, A., Bafalliu, J.A., Guillen-Navarro, E., Escalona, A., Ballesta-Martinez, M.J., Fuster, C., Fernández, A. and López-Expósito, I. 2009. Characterization of a *de novo* complex chromosomal rearrangement in a patient with cri-du-chat and trisomy 5p syndromes. *Am. J. Med. Genet. A.* 149A: 2513-2521.
7. Ravandi, F., Issa, J.P., Garcia-Manero, G., O'Brien, S., Pierce, S., Shan, J., Borthakur, G., Verstovsek, S., Faderl, S., Cortes, J. and Kantarjian, H. 2009. Superior outcome with hypomethylating therapy in patients with acute myeloid leukemia and high-risk myelodysplastic syndrome and chromosome 5 and 7 abnormalities. *Cancer* 115: 5746-5751.

## CHROMOSOMAL LOCATION

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

## SOURCE

TBCA (Y-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of TBCA of human origin.

## PRODUCT

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

Blocking peptide available for competition studies, sc-107101 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

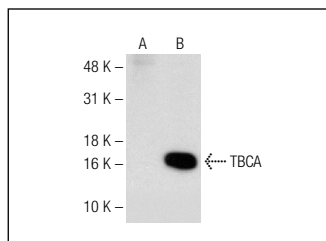
TBCA (Y-13) is recommended for detection of TBCA of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution 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.

## DATA



TBCA (Y-13): sc-107101. Western blot analysis of TBCA expression in non-transfected: sc-117752 (A) and human TBCA transfected: sc-113020 (B) 293T 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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Satisfaction  
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Try **TBCA (C-2): sc-398262**, our highly recommended monoclonal alternative to TBCA (Y-13).