α3C Tubulin (h3): 293T Lysate: sc-158213



The Power to Ouestion

BACKGROUND

Tubulin is a major cytoskeleton component that has five distinct forms, designated $\alpha,\,\beta,\,\gamma,\,\delta$ and ϵ Tubulin. α and β tubulins form heterodimers which multimerize to form a microtubule filament. There are five β Tubulin isoforms ($\beta1,\,\beta2,\,\beta3,\,\beta4A$ and $\beta4B$) that are expressed in mammalian tissues. $\beta1$ and $\beta4$ are present throughout the cytosol, $\beta2$ is present in the nuclei and nucleoplasm, and $\beta3$ is a neuron-specific cytoskeletal protein. γ Tubulin forms the gammasome, which is required for nucleating microtubule filaments at the centrosome. Both δ Tubulin and ϵ Tubulin are associated with the centrosome. δ Tubulin is a homolog of the $\it Chlamydomonas\,\delta$ Tubulin Uni3 and is found in association with the centrioles, whereas ϵ Tubulin localizes to the pericentriolar material. ϵ Tubulin exhibits a cell cycle-specific pattern of localization; first associating with only the older of the centrosomes in a newly duplicated pair, and later associating with both centrosomes.

REFERENCES

- 1. Weisenberg, R. 1981. Invited review: the role of nucleotide triphosphate in Actin and Tubulin assembly and function. Cell Motil. 1: 485-497.
- 2. Burns, R.G. 1991. α , β , and γ Tubulins: sequence comparisons and structural constraints. Cell Motil. Cytoskeleton 20: 181-189.
- Zheng, Y., Jung, M.K. and Oakley, B.R. 1991. γ Tubulin is present in Drosophila melangaster and Homo sapiens and is associated with the centrosome. Cell 65: 817-823.
- 4. Leask, A. and Stearns, T. 1998. Expression of amino- and carboxyl-terminal γ and β Tubulin mutants in cultured epithelial cells. J. Biol. Chem. 273: 2661-2668.
- Luduena, R.F. 1998. Multiple forms of Tubulin: different gene products and covalent modifications. Int. Rev. Cytol. 178: 207-275.
- Walss, C., Kreisberg, J.I. and Luduena, R.F. 1999. Presence of the β2 isotype of Tubulin in the nuclei of cultured mesangial cells from rat kidney. Cell Motil. Cytoskeleton 42: 274-284.
- Modig, C., Olsson, P.E., Barasoain, I., de Ines, C., Andreu, J.M., Roach, M.C., Luduena, R.F. and Wallin, M. 1999. Identification of β3 and β4 Tubulin isotypes in cold-adapted microtubules from Atlantic cod (Gadus morhua): antibody mapping and cDNA sequencing. Cell Motil. Cytoskeleton 42: 315-330.
- 8. Woulfe, J. and Munoz, D. 2000. Tubulin immunoreactive neuronal intranuclear inclusions in the human brain. Neuropathol. Appl. Neurobiol. 26: 161-171.
- 9. Chang, P. and Stearns, T. 2000. δ Tubulin and ϵ Tubulin: two new human centrosomal tubulins reveal new aspects of centrosome structure and function. Nat. Cell Biol. 2: 30-35.

CHROMOSOMAL LOCATION

Genetic locus: TUBA3C (human) mapping to 13q12.11.

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.

PRODUCT

 α 3C Tubulin (h3): 293T Lysate represents a lysate of human α 3C Tubulin transfected 293T cells and is provided as 100 μg protein in 200 μl SDS-PAGE buffer.

APPLICATIONS

 $\alpha 3C$ Tubulin (h3): 293T Lysate is suitable as a Western Blotting positive control for human reactive $\alpha 3C$ Tubulin antibodies. Recommended use: 10-20 μl per lane.

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

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

Santa Cruz Biotechnology, Inc. 1.800.457.3801 831.457.3800 fax 831.457.3801 **Europe** +00800 4573 8000 49 6221 4503 0 **www.scbt.com**