

β2C Tubulin (h2): 293T Lysate: sc-114016

BACKGROUND

Tubulin is a major cytoskeleton component that has five distinct forms, designated α , β , γ , δ and ϵ Tubulin. α and β tubulins form heterodimers which multimerize to form a microtubule filament. There are five β Tubulin isoforms ($\beta 1$, $\beta 2$, $\beta 3$, $\beta 4A$ and $\beta 4B$) that are expressed in mammalian tissues. $\beta 1$ and $\beta 4$ are present throughout the cytosol, $\beta 2$ is present in the nuclei and nucleoplasm, and $\beta 3$ is a neuron-specific cytoskeletal protein. γ Tubulin forms the gammaosome, 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 *Chlamydomonas* δ 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

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- 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 melanogaster* and *Homo sapiens* and is associated with the centrosome. *Cell* 65: 817-823.
- 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.
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- Woulfe, J. and Munoz, D. 2000. Tubulin immunoreactive neuronal intra-nuclear inclusions in the human brain. *Neuropathol. Appl. Neurobiol.* 26: 161-171.
- 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.

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.

PROTOCOLS

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

CHROMOSOMAL LOCATION

Genetic locus: TUBB4B (human) mapping to 9q34.3.

PRODUCT

$\beta 2C$ Tubulin (h2): 293T Lysate represents a lysate of human $\beta 2C$ Tubulin transfected 293T cells and is provided as 100 μ g protein in 200 μ l SDS-PAGE buffer.

APPLICATIONS

$\beta 2C$ Tubulin (h2): 293T Lysate is suitable as a Western Blotting positive control for human reactive $\beta 2C$ Tubulin antibodies. Recommended use: 10-20 μ l per lane.

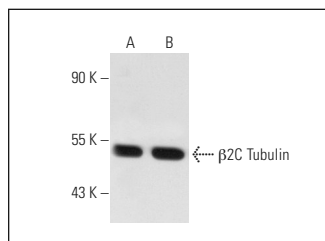
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

β Tubulin (G-8): sc-55529 is recommended as a positive control antibody for Western Blot analysis of enhanced human $\beta 2C$ Tubulin expression in $\beta 2C$ Tubulin transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

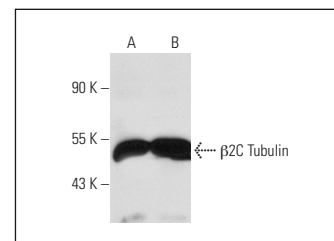
RECOMMENDED SUPPORT REAGENTS

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.

DATA



β Tubulin (G-8): sc-55529. Western blot analysis of $\beta 2C$ Tubulin expression in non-transfected: sc-117752 (A) and human $\beta 2C$ Tubulin transfected: sc-114016 (B) 293T whole cell lysates.



β Tubulin (2-28-33): sc-23949. Western blot analysis of $\beta 2C$ Tubulin expression in non-transfected: sc-117752 (A) and human $\beta 2C$ Tubulin transfected: sc-114016 (B) 293T whole cell lysates.

RESEARCH USE

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