SANTA CRUZ BIOTECHNOLOGY, INC.

ε Tubulin (5F3B7): sc-517236

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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. Multiple β Tubulin isoforms (β1, β2, β3, β4, β5, β6 and β8) have been characterized and are expressed in mammalian tissues. β1 and β4 are present throughout the cytosol, β2 is present in the nuclei and nucleoplasm, and β3 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 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

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.
3. Zheng, Y., et al 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.
5. Luduena, R.F. 1998. Multiple forms of tubulin: different gene products and covalent modifications. Int. Rev. Cytol. 178: 207-275.
6. Walss, C., et al. 1999. Presence of the β2 isotype of tubulin in the nuclei of cultured mesangial cells from rat kidney. Cell Motil. Cytoskeleton 42: 274-284.

CHROMOSOMAL LOCATION

Genetic locus: TUBE1 (human) mapping to 6q21.

SOURCE

ε Tubulin (5F3B7) is a mouse monoclonal antibody raised against a recombinant protein corresponding to amino acids 314-472 of ε Tubulin of human origin.

PRODUCT

Each vial contains 100 µg IgG_1 in 1.0 ml PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

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

APPLICATIONS

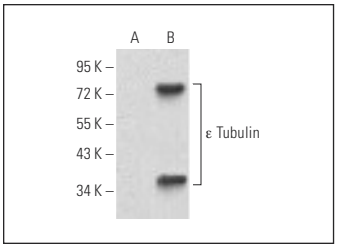
ε Tubulin (5F3B7) is recommended for detection of ε Tubulin of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500), flow cytometry (1 µg per 1 x 10^6 cells) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for ε Tubulin siRNA (h): sc-43486, ε Tubulin shRNA Plasmid (h): sc-43486-SH and ε Tubulin shRNA (h) Lentiviral Particles: sc-43486-V.

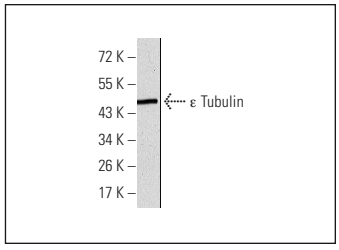
Molecular Weight of ε Tubulin: 60 kDa.

Positive Controls: human ε Tubulin (314-472)-hIgGFc transfected HEK293 whole cell lysate.

DATA



ε Tubulin (5F3B7): sc-517236. Western blot analysis of ε Tubulin expression in non-transfected (**A**) and human ε Tubulin (314-472)-hIgGFc transfected (**B**) HEK293 whole cell lysates.



ε Tubulin (5F3B7): sc-517236. Western blot analysis of human recombinant ε Tubulin (314-472) fusion protein.

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.