SANTA CRUZ BIOTECHNOLOGY, INC.

ε Tubulin (D-16): sc-10471

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. There are five β tubulin isoforms (β-I, β-II, β-III, β-IVa and β-IVb) that are expressed in mammalian tissues. β-I and β-IV are present throughout the cytosol, β-II is present in the nuclei and nucleoplasm, and β-III 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 homologue 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. 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.
3. Burns, R.G. 1991. α-, β-, and γ-tubulins: sequence comparisons and structural constraints. Cell Motil. Cytoskeleton 20: 181-189.
4. Leask, A. and Stearns, T. 1998. Expression of amino-and carboxyl-terminal γ- and α-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 βII 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 (D-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of ε Tubulin of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-10471 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

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 (D-16) 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

ε Tubulin (D-16) is also recommended for detection of ε Tubulin in additional species, including equine, canine and bovine.

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.

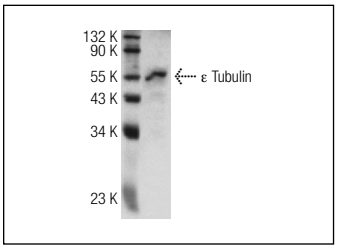
Molecular Weight of ε Tubulin: 60 kDa.

Positive Controls: BJAB whole cell lysate: sc-2207.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



ε Tubulin (D-16): sc-10471. Western blot analysis of ε Tubulin expression in BJAB whole cell lysate.

RESEARCH USE

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

MONOS Satisfaction Guaranteed

Try **ε Tubulin (5F3B7): sc-517236**, our highly recommended monoclonal alternative to ε Tubulin (D-16).