

β Tubulin (L-15): sc-31782

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 ($\beta 1$, $\beta 2$, $\beta 3$, $\beta 4$, $\beta 5$, $\beta 6$ and $\beta 8$) have been characterized and 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 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

- Weisenberg, R. 1981. Invited review: the role of nucleotide triphosphate in Actin and tubulin assembly and function. *Cell Motil.* 1: 485-497.
- 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.

SOURCE

β Tubulin (L-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of β Tubulin of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-31782 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

β Tubulin (L-15) is recommended for detection of β Tubulin, $\beta 2C$ Tubulin, $\beta 3$ Tubulin, $\beta 4$ Tubulin and, to a lesser extent, $\beta 2B$ Tubulin of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ 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).

β Tubulin (L-15) is also recommended for detection of β Tubulin, $\beta 2C$ Tubulin, $\beta 3$ Tubulin, $\beta 4$ Tubulin and, to a lesser extent, $\beta 2B$ Tubulin in additional species, including equine, canine, bovine, porcine and avian.

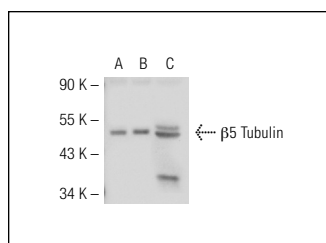
Molecular Weight of β Tubulin: 55 kDa.

Positive Controls: $\beta 5$ Tubulin (m): 293T Lysate: sc-118032, $\beta 4$ Tubulin (h): 293T Lysate: sc-113581 or K-562 whole cell lysate: sc-2203.

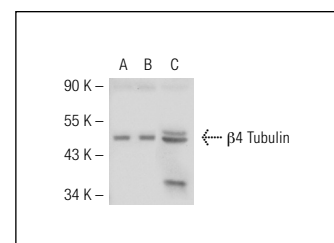
RECOMMENDED SECONDARY REAGENTS

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



β Tubulin (L-15): sc-31782. Western blot analysis of $\beta 5$ Tubulin expression in non-transfected 293T: sc-117752 (A), mouse $\beta 5$ Tubulin transfected 293T: sc-118032 (B) and K-562 (C) whole cell lysates.



β Tubulin (L-15): sc-31782. Western blot analysis of $\beta 4$ Tubulin expression in non-transfected 293T: sc-117752 (A), human $\beta 4$ Tubulin transfected 293T: sc-113581 (B) and K-562 (C) whole cell lysates.

SELECT PRODUCT CITATIONS

- Xu, C., Xu, W., Palmer, A.E. and Reed, J.C. 2008. Bcl-1 regulates endoplasmic reticulum Ca^{2+} homeostasis downstream of Bcl-2 family proteins. *J. Biol. Chem.* 283: 11477-11484.

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.

PROTOCOLS

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

MONOS
Satisfaction
Guaranteed

Try β Tubulin (D-10): sc-5274 or β Tubulin (G-8): sc-55529, our highly recommended monoclonal alternatives to β Tubulin (L-15). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see β Tubulin (D-10): sc-5274.