

β Tubulin (SAP.4G5): sc-58884

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 (β 1, β 2, β 3, β 4, β 5, β 6 and β 8) have been characterized and are expressed in mammalian tissues. β 1 and β 4 are present throughout the cytosol, β 2 is present in the nuclei and nucleoplasm, and β 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

- 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., et al. 1991. γ Tubulin is present in *Drosophila melanogaster* and *Homo sapiens* and is associated with the centrosome. *Cell* 65: 817-823.
- Ludueno, R.F. 1998. Multiple forms of Tubulin: different gene products and covalent modifications. *Int. Rev. Cytol.* 178: 207-275.

SOURCE

β Tubulin (SAP.4G5) is a mouse monoclonal antibody raised against the C-terminus of β Tubulin isotype I of chicken origin.

PRODUCT

Each vial contains 200 μ g IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

β Tubulin (SAP.4G5) is recommended for detection of β Tubulin of mouse, rat, human, *Xenopus*, avian, bovine and canine 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 immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

Molecular Weight of β Tubulin: 55 kDa.

Positive Controls: BJAB whole cell lysate: sc-2207, A-431 whole cell lysate: sc-2201 or HeLa whole cell lysate: sc-2200.

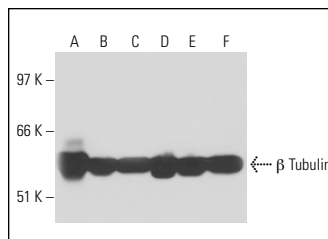
STORAGE

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

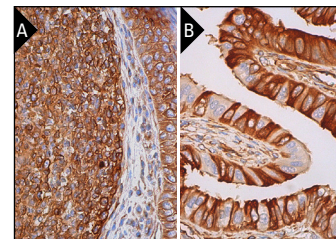
RESEARCH USE

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

DATA



β Tubulin (SAP.4G5): sc-58884. Western blot analysis of β Tubulin expression in NIH/3T3 (A), F9 (B), A-431 (C), BJAB (D), KNRK (E) and HeLa (F) whole cell lysates.



β Tubulin (SAP.4G5): sc-58884. Immunoperoxidase staining of formalin fixed, paraffin-embedded human tonsil tissue showing cytoplasmic staining of squamous epithelial cells and cells in germinal center and cytoplasmic and membrane staining of cells in non-germinal center (A), and of human fallopian tube tissue showing cytoplasmic and membrane staining of glandular cells (B).

SELECT PRODUCT CITATIONS

- Busso, C.S., et al. 2011. Ubiquitination of human AP-endonuclease 1 (APE1) enhanced by T233E substitution and by Cdk5. *Nucleic Acids Res.* 39: 8017-8028.
- Goto, T., et al. 2013. IQGAP1 functions as a modulator of dishevelled nuclear localization in Wnt signaling. *PLoS ONE* 8: e60865.
- Iwasaki, Y. and Thomsen, G.H. 2014. The splicing factor PQBP1 regulates mesodermal and neural development through FGF signaling. *Development* 141: 3740-3751.
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- Yamagishi, M., et al. 2022. Anchoring geometry is a significant factor in determining the direction of kinesin-14 motility on microtubules. *Sci. Rep.* 12: 15417.
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See β Tubulin (D-10): sc-5274 for β Tubulin antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.