

β Tubulin (G-8): sc-55529



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 (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 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., et al. 1991. γ Tubulin is present in *Drosophila melanogaster* and *Homo sapiens* and is associated with the centrosome. *Cell* 65: 817-823.

SOURCE

β Tubulin (G-8) is a mouse monoclonal antibody raised against amino acids 210-444 of β Tubulin of human origin.

PRODUCT

Each vial contains 200 μ g IgG₃ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

β Tubulin (G-8) is recommended for detection of β Tubulin of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range), 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), immunohistochemistry (including paraffin-embedded sections) (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 (G-8) is also recommended for detection of β Tubulin in additional species, including equine, canine, bovine, porcine and avian.

Molecular Weight of β Tubulin: 55 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, BJAB whole cell lysate: sc-2207 or NIH/3T3 whole cell lysate: sc-2210.

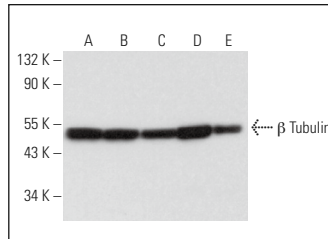
STORAGE

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

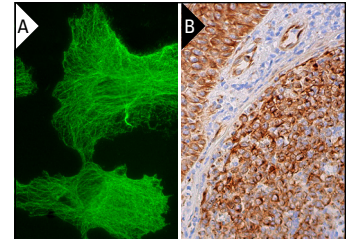
RESEARCH USE

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

DATA



β Tubulin (G-8): sc-55529. Western blot analysis of β Tubulin expression in HeLa (A), BJAB (B), NIH/3T3 (C), PC-12 (D) and U-2 OS (E) whole cell lysates. Detection reagent used: m-IgG_k BP-HRP: sc-516102.



β Tubulin (G-8): sc-55529. Immunofluorescence staining of formalin-fixed Hep G2 cells showing cytoskeletal localization (A). 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 (B).

SELECT PRODUCT CITATIONS

- Gong, Y., et al. 2005. NSPc1, a mainly nuclear localized protein of novel PcG family members, has a transcription repression activity related to its PKC phosphorylation site at S183. *FEBS Lett.* 579: 115-121.
- Zambrano, J.N., et al. 2018. Staurosporine, an inhibitor of hormonally up-regulated neu-associated kinase. *Oncotarget* 9: 35962-35973.
- Tsuchiya, H., et al. 2019. HBx and c-MYC cooperate to induce URI1 expression in HBV-related hepatocellular carcinoma. *Int. J. Mol. Sci.* 20: 5714.
- Navarro-Hernandez, I.C., et al. 2020. Tetraspanin 33 (TSPAN33) regulates endocytosis and migration of human B lymphocytes by affecting the tension of the plasma membrane. *FEBS J.* 287: 3449-3471.
- Moyetta, N.R., et al. 2021. Morphological and ultrastructural characterization of hemocytes in an insect model, the hematophagous *Dipetalogaster maxima* (Hemiptera: Reduviidae). *Insects* 12: 640.
- Fan, J., et al. 2022. Combined anti-tumor efficacy of somatostatin fusion protein and vaccinia virus on tumor cells with high expression of somatostatin receptors. *Sci. Rep.* 12: 16885.
- Shim, S.M., et al. 2023. The Cys-N-degron pathway modulates pexophagy through the N-terminal oxidation and arginylation of ACAD10. *Autophagy* 19: 1642-1661.
- Jiao, X., et al. 2024. A cyclin D1 intrinsically disordered domain accesses modified histone motifs to govern gene transcription. *Oncogenesis* 13: 4.
- Dsouza, L., et al. 2025. Vaccinia growth factor-dependent modulation of the mTORC1-CAD axis upon nutrient restriction. *J. Virol.* 99: e0211024.



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.