

Pan β Tubulin (C-10): sc-398937

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.

SOURCE

Pan β Tubulin (C-10) is a mouse monoclonal antibody raised against amino acids 209-305 mapping within an internal region of β 4 Tubulin of human 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.

Pan β Tubulin (C-10) is available conjugated to agarose (sc-398937 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-398937 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-398937 PE), fluorescein (sc-398937 FITC), Alexa Fluor[®] 488 (sc-398937 AF488), Alexa Fluor[®] 546 (sc-398937 AF546), Alexa Fluor[®] 594 (sc-398937 AF594) or Alexa Fluor[®] 647 (sc-398937 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-398937 AF680) or Alexa Fluor[®] 790 (sc-398937 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

Pan β Tubulin (C-10) is recommended for detection of β 1, β 2A, β 2B, β 2C, β 3, β 4, β 5, β 6 and β 8 Tubulin of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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), 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).

Molecular Weight of Pan β Tubulin: 50 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, ECV304 cell lysate: sc-2269 or Hep G2 cell lysate: sc-2227.

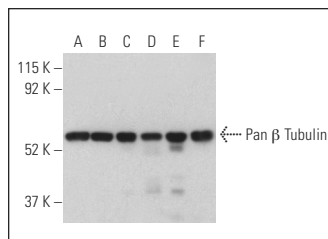
STORAGE

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

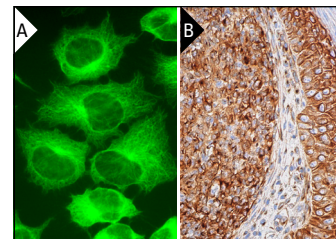
RESEARCH USE

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

DATA



Pan β Tubulin (C-10): sc-398937. Western blot analysis of Pan β Tubulin expression in ECV304 (A), Hep G2 (B), MDA-MB-231 (C), HUV-EC-C (D), U-87 MG (E) and HeLa (F) whole cell lysates. Detection reagent used: m-IgG₁ BP-HRP: sc-525408.



Pan β Tubulin (C-10): sc-398937. Immunofluorescence staining of formalin-fixed HeLa cells showing cytoskeletal localization. Detected with m-IgG Fc BP-FITC: sc-533651 (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human tonsil tissue showing cytoplasmic staining of cells in germinal center, non-germinal center and squamous epithelial cells (B).

SELECT PRODUCT CITATIONS

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- Borie, C., et al. 2018. Eneidyne bearing polyfluoroaryl sulfoxide as new antiproliferative agents with dual targeting of microtubules and DNA. *Eur. J. Med. Chem.* 148: 306-313.
- Langebäck, A., et al. 2019. CETSA-based target engagement of taxanes as biomarkers for efficacy and resistance. *Sci. Rep.* 9: 19384.
- Guérit, D., et al. 2020. Primary myeloid cell proteomics and transcriptomics: importance of β Tubulin isoforms for osteoclast function. *J. Cell Sci.* 133: jcs239772.
- Torrino, S., et al. 2021. Mechano-induced cell metabolism promotes microtubule glutamylation to force metastasis. *Cell Metab.* 33: 1342-1357.e10.
- Burr, S.D., et al. 2022. Rap1a activity elevated the impact of endogenous AGEs in diabetic collagen to stimulate increased myofibroblast transition and oxidative stress. *Int. J. Mol. Sci.* 23: 4480.
- Orareya, A.N., et al. 2022. HIV-1 tat upregulates the receptor for advanced glycation end products and superoxide dismutase-2 in the heart of transgenic mice. *Viruses* 14: 2191.
- Kennon, A.M. and Stewart, J.A. 2023. Paracrine signals in calcified conditioned media elicited differential responses in primary aortic vascular smooth muscle cells and in adventitial fibroblasts. *Int. J. Mol. Sci.* 24: 3599.

PROTOCOLS

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