

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 ($\beta 1$, $\beta 2$, $\beta 3$, $\beta 4$, $\beta 5$, $\beta 6$ 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.

SOURCE

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

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

APPLICATIONS

Pan β Tubulin (C-10) is recommended for detection of $\beta 1$, $\beta 2A$, $\beta 2B$, $\beta 2C$, $\beta 3$, $\beta 4$, $\beta 5$, $\beta 6$ and $\beta 8$ 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).

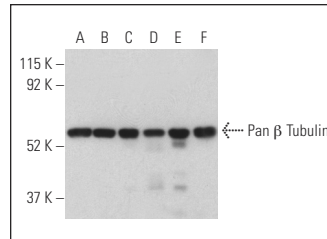
Molecular Weight of Pan β Tubulin: 50 kDa.

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

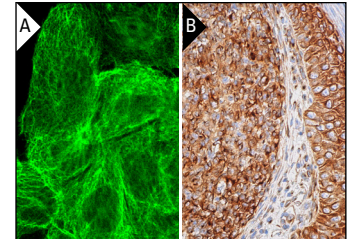
RESEARCH USE

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 A-431 cells showing cytoskeletal localization (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

- Paladino, D., et al. 2016. A novel nuclear Src and p300 signaling axis controls migratory and invasive behavior in pancreatic cancer. *Oncotarget* 7: 7253-7267.
- Xue, L., et al. 2017. Duration of simulated microgravity affects the differentiation of mesenchymal stem cells. *Mol. Med. Rep.* 15: 3011-3018.
- Borie, C., et al. 2018. Eneidiynes 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.
- Burr, S.D., et al. 2020. The impact of diabetic conditions and AGE/RAGE signaling on cardiac fibroblast migration. *Front. Cell Dev. Biol.* 8: 112.
- Guérit, D., et al. 2020. Primary myeloid cell proteomics and transcriptomics: importance of β Tubulin isoforms for osteoclast function. *J. Cell Sci.* 133: jcs239772.
- Burr, S.D. and Stewart, J.A. 2021. Rap1a overlaps the AGE/RAGE signaling cascade to alter expression of α -SMA, p-NF κ B, and p-PKC- ζ in cardiac fibroblasts isolated from type 2 diabetic mice. *Cells* 10: 557.

PROTOCOLS

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