SANTA CRUZ BIOTECHNOLOGY, INC.

β Tubulin (E-10): sc-365791

SANTA CRUZ BIOTECHNOLOGY

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 (β1, β2, β3, β4, β5, β6 and β8) have been characterized and are expressed in mammalian tissues. β1 and β4 are present throughout the cytosol, β2 is present in the nuclei and nucleoplasm, and β3 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

β Tubulin (E-10) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 13-43 near the N-terminus of β Tubulin of *Drosophila melanogaster* origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

β Tubulin (E-10) is available conjugated to agarose (sc-365791 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-365791 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-365791 PE), fluorescein (sc-365791 FITC), Alexa Fluor® 488 (sc-365791 AF488), Alexa Fluor® 546 (sc-365791 AF546), Alexa Fluor® 594 (sc-365791 AF594) or Alexa Fluor® 647 (sc-365791 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-365791 AF680) or Alexa Fluor® 790 (sc-365791 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-365791 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

β Tubulin (E-10) is recommended for detection of β Tubulin of *Drosophila melanogaster* origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg 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).

Molecular Weight of β Tubulin: 55 kDa.

Positive Controls: Schneider's *Drosophila* line 2 whole cell lysate.

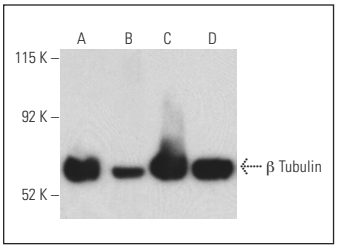
STORAGE

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

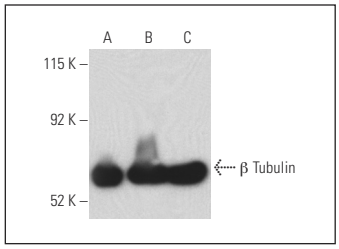
RESEARCH USE

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

DATA



β Tubulin (E-10): sc-365791. Western blot analysis of β Tubulin expression in Caki-1 (**A**), THP-1 (**B**), HeLa (**C**) and HT-1080 (**D**) whole cell lysates. Detection reagent used: m-IgG_1 BP-HRP: sc-525408.



β Tubulin (E-10): sc-365791. Western blot analysis of β Tubulin expression in A549 (**A**), U-251-MG (**B**) and PC-3 (**C**) whole cell lysates. Detection reagent used: m-IgG_1 BP-HRP: sc-525408.

SELECT PRODUCT CITATIONS

1. Huang, F., et al. 2017. TRPM8 downregulation by Angiotensin II in vascular smooth muscle cells is involved in hypertension. Mol. Med. Rep. 15: 1900-1908.
2. Wang, Y., et al. 2018. Benzo(a)pyrene promotes Hep G2 cell migration and invasion by upregulating phosphorylated extracellular signal-regulated kinase expression. Oncol. Lett. 15: 8325-8332.
3. Liu, X., et al. 2018. Lycopene ameliorates oxidative stress in the aging chicken ovary via activation of Nrf2/HO-1 pathway. Aging 10: 2016-2036.
4. Nevzglyadova, O.V., et al. 2018. Yeast red pigment modifies cloned human α-synuclein pathogenesis in Parkinson disease models in *Saccharomyces cerevisiae* and *Drosophila melanogaster.* Neurochem. Int. 120: 172-181.
5. Yue, X., et al. 2019. MicroRNA-124 negatively regulates chloride intracellular channel 1 to suppress the migration and invasion of liver cancer cells. Oncol. Rep. 42: 1380-1390.
6. Huang, T., et al. 2019. Meclofenamic acid represses spermatogonial proliferation through modulating m^6A RNA modification. J. Anim. Sci. Biotechnol. 10: 63.
7. Zhai, H., et al. 2019. Cadmium induces A549 cell migration and invasion by activating ERK. Exp. Ther. Med. 18: 1793-1799.
8. Balabanidou, V., et al. 2019. Mosquitoes cloak their legs to resist insecticides. Proc. Biol. Sci. 286: 20191091.
9. Gomez, G.A., et al. 2019. WNT/β-catenin modulates the axial identity of ES derived human neural crest. Development 146: dev175604.
10. Métivier, M., et al. 2021. *Drosophila* Tubulin-specific chaperone E recruits Tubulin around chromatin to promote mitotic spindle assembly. Curr. Biol. 31: 684-695.e6.

PROTOCOLS

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