SANTA CRUZ BIOTECHNOLOGY, INC.

β2 Tubulin (7B9): sc-47751

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.

CHROMOSOMAL LOCATION

Genetic locus: TUBB2A (human) mapping to 6p25.2; Tubb2a (mouse) mapping to 13 A3.3.

SOURCE

β2 Tubulin (7B9) is a mouse monoclonal antibody raised against amino acids 437-445 of β2A Tubulin of human 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.

β2 Tubulin (7B9) is available conjugated to agarose (sc-47751 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-47751 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-47751 PE), fluorescein (sc-47751 FITC), Alexa Fluor® 488 (sc-47751 AF488), Alexa Fluor® 546 (sc-47751 AF546), Alexa Fluor® 594 (sc-47751 AF594) or Alexa Fluor® 647 (sc-47751 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-47751 AF680) or Alexa Fluor® 790 (sc-47751 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA

APPLICATIONS

β2 Tubulin (7B9) is recommended for detection of β2 Tubulin of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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 immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

Molecular Weight of β2 Tubulin: 55 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, 3T3-L1 cell lysate: sc-2243 or RAW 264.7 whole cell lysate: sc-2211.

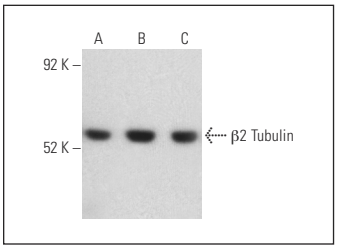
RESEARCH USE

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

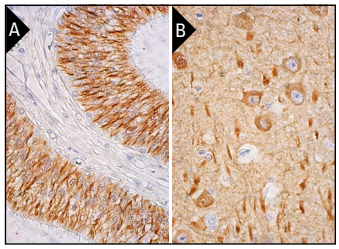
STORAGE

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

DATA



β2 Tubulin (7B9): sc-47751. Western blot analysis of β2 Tubulin expression in Jurkat (**A**), 3T3-L1 (**B**) and RAW 264.7 (**C**) whole cell lysates. Detection reagent used: m-IgG Fc BP-HRP: sc-525409.



β2 Tubulin (7B9): sc-47751. Immunoperoxidase staining of formalin fixed, paraffin-embedded human epididymis tissue showing cytoplasmic and membrane staining of glandular cells (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human cerebral cortex tissue showing cytoplasmic staining of neuronal cells, glial cells and neuropil (**B**). Detected with m-IgG Fc BP-B: sc-533652 and ImmunoCruz® ABC Kit: sc-516216.

SELECT PRODUCT CITATIONS

1. Lou, L.X., et al. 2009. Endoplasmic reticulum stress involved in heart and liver injury in iron-loaded rats. Clin. Exp. Pharmacol. Physiol. 36: 612-618.
2. Gill, B.C., et al. 2013. Neurotrophin therapy improves recovery of the neuromuscular continence mechanism following simulated birth injury in rats. Neurourol. Urodyn. 32: 82-87.
3. Szaflarski, W., et al. 2016. Vinca alkaloid drugs promote stress-induced translational repression and stress granule formation. Oncotarget 7: 30307-30322.
4. Borghesi, J., et al. 2017. Phenotype and multipotency of rabbit *(Oryctolagus cuniculus)* amniotic stem cells. Stem Cell Res. Ther. 8: 27.
5. Zhang, S., et al. 2019. Shrimp miRNA suppresses the stemness of human cancer stem cells via the PIN1 pathway. FASEB J. 33: 10767-10779.
6. Niu, Y., et al. 2021. Bisphenols disrupt thyroid hormone (TH) signaling in the brain and affect TH-dependent brain development in *Xenopus laevis*. Aquat. Toxicol. 237: 105902.
7. de Sá Schiavo Matias, G., et al. 2022. *In vivo* biocompatibility analysis of the recellularized canine tracheal scaffolds with canine epithelial and endothelial progenitor cells. Bioengineered 13: 3551-3565.
8. Yang, H., et al. 2023. An analysis of the gene expression associated with lymph node metastasis in colorectal cancer. Int. J. Genomics 2023: 9942663.

PROTOCOLS

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