SANTA CRUZ BIOTECHNOLOGY, INC.

β Tubulin (TUB 2.1): sc-58886



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 centroles, 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

- 1. 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.

SOURCE

 β Tubulin (TUB 2.1) is a mouse monoclonal antibody raised against purified brain β Tubulin of rat origin.

PRODUCT

Each vial contains 200 $\mu g\, lg G_1$ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

β Tubulin (TUB 2.1) is available conjugated to agarose (sc-58886 AC), 500 μg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-58886 HRP), 200 μg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-58886 PE), fluorescein (sc-58886 FITC), Alexa Fluor[®] 488 (sc-58886 AF488), Alexa Fluor[®] 546 (sc-58886 AF546), Alexa Fluor[®] 594 (sc-58886 AF594) or Alexa Fluor[®] 647 (sc-58886 AF647), 200 μg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-58886 AF680) or Alexa Fluor[®] 790 (sc-58886 AF790), 200 μg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

 β Tubulin (TUB 2.1) is recommended for detection of β Tubulin of mouse, rat, human and bovine 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 paraffinembedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

Molecular Weight of β Tubulin: 55 kDa.

Positive Controls: Raji whole cell lysate: sc-364236, PC-12 cell lysate: sc-2250 or BJAB whole cell lysate: sc-2207.

STORAGE

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

DATA





β Tubulin (TUB 2.1) Alexa Fluor[®] 488: sc-58886 AF488. Direct fluorescent western blot analysis of β Tubulin expression in AL84 (**A**), PC1 (**B**), Raji (**C**) and HeLa (**D**) whole cell lysates. Blocked with UltraCruz[®] Blocking Reagent: sc-516214. Cruz Marker[™] Molecular Weight Standards detected with Cruz Marker MW Tag-Alexa Fluor[®] 647: sc-516791.

β Tubulin (TUB 2.1): sc-58886. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoskeletal localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human fallopian tube tissue showing cytoplasmic and membrane staining of glandular cells (B).

SELECT PRODUCT CITATIONS

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RESEARCH USE

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