SANTA CRUZ BIOTECHNOLOGY, INC.

β Tubulin (DM1B): sc-58880

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.

REFERENCES

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3. Zheng, Y., Jung, M.K. and Oakley, B.R. 1991. γ Tubulin is present in *Drosophila melangaster* and *Homo sapiens* and is associated with the centrosome. Cell 65: 817-823.
4. Leask, A. and Stearns, T. 1998. Expression of amino- and carboxyl-terminal γ and β Tubulin mutants in cultured epithelial cells. J. Biol. Chem. 273: 2661-2668.
5. Luduena, R.F. 1998. Multiple forms of Tubulin: different gene products and covalent modifications. Int. Rev. Cytol. 178: 207-275.
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7. Modig, C., Olsson, P.E., Barasoain, I., de Ines, C., Andreu, J.M., Roach, M.C., Luduena, R.F. and Wallin, M. 1999. Identification of β3 and β4 Tubulin isotypes in cold-adapted microtubules from Atlantic cod *(Gadus morhua):* antibody mapping and cDNA sequencing. Cell Motil. Cytoskeleton 42: 315-330.
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9. Chang, P. and Stearns, T. 2000. δ Tubulin and ε Tubulin: two new human centrosomal Tubulins reveal new aspects of centrosome structure and function. Nat. Cell Biol. 2: 30-35.

SOURCE

β Tubulin (DM1B) is a mouse monoclonal antibody raised against amino acids 416-460 of β Tubulin of chicken origin.

PRODUCT

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

APPLICATIONS

β Tubulin (DM1B) is recommended for detection of β Tubulin of avian 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); non cross-reactive with α Tubulin.

Molecular Weight of β Tubulin: 55 kDa.

SELECT PRODUCT CITATIONS

1. Latham, S.L., Ehmke, N., Reinke, P.Y.A., Taft, M.H., Eicke, D., Reindl, T., Stenzel, W., Lyons, M.J., Friez, M.J., Lee, J.A., Hecker, R., Frühwald, M.C., Becker, K., Neuhann, T.M., Horn, D., Schrock, E., Niehaus, I., et al. 2018. Variants in exons 5 and 6 of ACTB cause syndromic thrombocytopenia. Nat. Commun. 9: 4250.
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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.

RESEARCH USE

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

PROTOCOLS

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