SANTA CRUZ BIOTECHNOLOGY, INC.

α Tubulin (DM1A): sc-32293

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

α Tubulin (DM1A) is a mouse monoclonal antibody raised against native chick brain microtubules of chicken 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.

α Tubulin (DM1A) is available conjugated to agarose (sc-32293 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-32293 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-32293 PE), fluorescein (sc-32293 FITC), Alexa Fluor® 488 (sc-32293 AF488), Alexa Fluor® 546 (sc-32293 AF546), Alexa Fluor® 594 (sc-32293 AF594) or Alexa Fluor® 647 (sc-32293 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-32293 AF680) or Alexa Fluor® 790 (sc-32293 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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

APPLICATIONS

α Tubulin (DM1A) is recommended for detection of α Tubulin of mouse, rat, human and 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).

Suitable for use as control antibody for α Tubulin siRNA (h): sc-29188, α Tubulin siRNA (m): sc-29189, α Tubulin shRNA Plasmid (h): sc-29188-SH, α Tubulin shRNA Plasmid (m): sc-29189-SH, α Tubulin shRNA (h) Lentiviral Particles: sc-29188-V and α Tubulin shRNA (m) Lentiviral Particles: sc-29189-V.

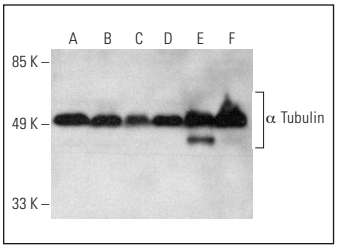
Molecular Weight of α Tubulin: 55 kDa.

Positive Controls: PC-12 cell lysate: sc-2250, A-431 whole cell lysate: sc-2201 or K-562 whole cell lysate: sc-2203.

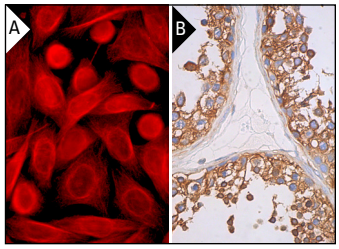
STORAGE

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

DATA



α Tubulin (DM1A) HRP: sc-32293 HRP. Direct western blot analysis of α Tubulin expression in PC-12 (**A**), Hep G2 (**B**), A549 (**C**), A-431 (**D**), Jurkat (**E**) and K-562 (**F**) whole cell lysates.



α Tubulin (DM1A) Alexa Fluor® 594: sc-32293 AF594. Direct immunofluorescence staining of formalin-fixed SW480 cells showing cytoskeletal localization. Blocked with UltraCruz® Blocking Reagent: sc-516214 (**A**).
α Tubulin (DM1A)HRP: sc-32293 HRP. Direct immunoperoxidase staining of formalin fixed, paraffin-embedded human testis tissue showing cytoplasmic and membrane staining of cells in seminiferous ducts. Blocked with 0.25X UltraCruz® Blocking Reagent: sc-516214 (**B**).

SELECT PRODUCT CITATIONS

1. Lee, J., et al. 2003. Temporally and spatially selective loss of Rec8 protein from meiotic chromosomes during mammalian meiosis. J. Cell Sci. 116: 2781-2790.
2. Del Nagro, C.J., et al. 2014. Chk1 inhibition in p53-deficient cell lines drives rapid chromosome fragmentation followed by caspase-independent cell death. Cell Cycle 13: 303-314.
3. Kopanic, J.L., et al. 2015. Degradation of gap junction connexins is regulated by the interaction with Cx43-interacting protein of 75 kDa (CIP75). Biochem. J. 466: 571-585.
4. McCampbell, A.S., et al. 2016. Loss of p27 associated with risk for endometrial carcinoma arising in the setting of obesity. Curr. Mol. Med. 16: 252-265.
5. Li, J.J., et al. 2017. EphB3 stimulates cell migration and metastasis in a kinase-dependent manner through Vav2-Rho GTPase axis in papillary thyroid cancer. J. Biol. Chem. 292: 1112-1121.
6. Li, W., et al. 2018. Neuronal adaptor FE65 stimulates Rac1-mediated neurite outgrowth by recruiting and activating ELMO1. J. Biol. Chem. 293: 7674-7688.
7. Han, X., et al. 2019. Osteoblastic differentiation improved by bezafibrate-induced mitochondrial biogenesis in deciduous tooth-derived pulp stem cells from a child with Leigh syndrome. Biochem. Biophys. Rep. 17: 32-37.
8. Yi, S.A., et al. 2020. HPV-mediated nuclear export of HP1γ drives cervical tumorigenesis by downregulation of p53. Cell Death Differ. 27: 2537-2551.

RESEARCH USE

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