

α Tubulin (B-5-1-2): sc-23948

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 ($\beta 1$, $\beta 2$, $\beta 3$, $\beta 4$, $\beta 5$, $\beta 6$ and $\beta 8$) have been characterized and are expressed in mammalian tissues. $\beta 1$ and $\beta 4$ are present throughout the cytosol, $\beta 2$ is present in the nuclei and nucleoplasm, and $\beta 3$ 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 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 (B-5-1-2) is a mouse monoclonal antibody raised against Sarkosyl-resistant ribbons from sperm axonemes of *Strongylocentrotus purpuratus* (sea urchin) origin.

PRODUCT

Each vial contains 200 μ g IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

α Tubulin (B-5-1-2) is available conjugated to agarose (sc-23948 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-23948 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-23948 PE), fluorescein (sc-23948 FITC), Alexa Fluor[®] 488 (sc-23948 AF488), Alexa Fluor[®] 546 (sc-23948 AF546), Alexa Fluor[®] 594 (sc-23948 AF594) or Alexa Fluor[®] 647 (sc-23948 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-23948 AF680) or Alexa Fluor[®] 790 (sc-23948 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

α Tubulin (B-5-1-2) is recommended for detection of α Tubulin of multiple origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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.

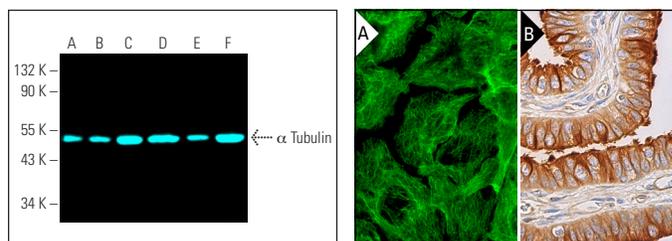
Molecular Weight of α Tubulin: 55 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, 3T3-L1 cell lysate: sc-2243 or Sol8 cell lysate: sc-2249.

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 (B-5-1-2) Alexa Fluor[®] 647: sc-23948 AF647. Direct fluorescent western blot analysis of α Tubulin expression in NIH/3T3 (A), 3T3-L1 (B), Sol8 (C), C2C12 (D), SJRH30 (E) and HeLa (F) whole cell lysates. Blocked with UltraCruz[®] Blocking Reagent: sc-516214. Cruz Marker[™] Molecular Weight Standards detected with Cruz Marker[™] MW Tag-Alexa Fluor[®] 488: sc-516790.

α Tubulin (B-5-1-2): sc-23948. Immunofluorescence staining of formalin-fixed A-431 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

- Sun, W., et al. 2006. Statins activate AMP-activated protein kinase *in vitro* and *in vivo*. *Circulation* 114: 2655-2662.
- Tapia Del Fierro, A., et al. 2023. SMCHD1 has separable roles in chromatin architecture and gene silencing that could be targeted in disease. *Nat. Commun.* 14: 5466.
- activity impairs basal autophagy and late endosome positioning under nutrient-rich conditions in human colon cells. *Biochem. Biophys. Res. Commun.* 724: 150198.
- Potes, Y., et al. 2024. p66Shc signaling and autophagy impact on C2C12 myoblast differentiation during senescence. *Cell Death Dis.* 15: 200.
- Yan, X., et al. 2024. NOP14-mediated ribosome biogenesis is required for mTORC2 activation and predicts rapamycin sensitivity. *J. Biol. Chem.* 300: 105681.
- Masclef, L., et al. 2024. O-GlcNAcylation of FOXK1 orchestrates the E2F pathway and promotes oncogenesis. *bioRxiv* 2024.03.01.582838.
- Koh, M., et al. 2024. ANXA2 (annexin A2) is crucial to ATG7-mediated autophagy, leading to tumor aggressiveness in triple-negative breast cancer cells. *Autophagy* 20: 659-674.
- Hao, W., et al. 2024. Marine cytotoxin santacruzamate derivatives as potent HDAC1-3 inhibitors and their synergistic anti-leukemia effects with venetoclax. *Mar. Drugs* 22: 250.
- Sun, Q., et al. 2025. Pervasive RNA-binding protein enrichment on TAD boundaries regulates TAD organization. *Nucleic Acids Res.* 53: gkae1271.

RESEARCH USE

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