

α Tubulin (TU-02): sc-8035



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 ($\beta 1$, $\beta 2$, $\beta 3$, $\beta 4$, $\beta 5$, $\beta 6$ 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 gammaosome, 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 (TU-02) is a mouse monoclonal antibody raised against amino acids 1-451 representing full length α Tubulin of porcine origin.

PRODUCT

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

α Tubulin (TU-02) is available conjugated to agarose (sc-8035 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-8035 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-8035 PE), fluorescein (sc-8035 FITC), Alexa Fluor[®] 488 (sc-8035 AF488), Alexa Fluor[®] 546 (sc-8035 AF546), Alexa Fluor[®] 594 (sc-8035 AF594) or Alexa Fluor[®] 647 (sc-8035 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-8035 AF680) or Alexa Fluor[®] 790 (sc-8035 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

In addition, α Tubulin (TU-02) is available conjugated to either TRITC (sc-8035 TRITC, 200 μ g/ml) or Alexa Fluor[®] 405 (sc-8035 AF405, 200 μ g/ml), 100 tests in 2 ml, for IF, IHC(P) and FCM.

APPLICATIONS

α Tubulin (TU-02) is recommended for detection of α Tubulin of mouse, rat, human and porcine 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500), flow cytometry (1 μ g per 1×10^6 cells) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Molecular Weight of α Tubulin: 55 kDa.

Positive Controls: NIH/3T3 whole cell lysate: sc-2210, C2C12 whole cell lysate: sc-364188 or NAMALWA cell lysate: sc-2234.

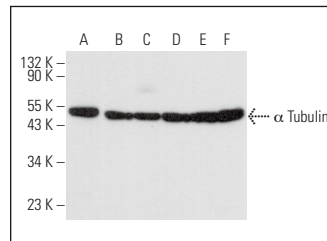
RESEARCH USE

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

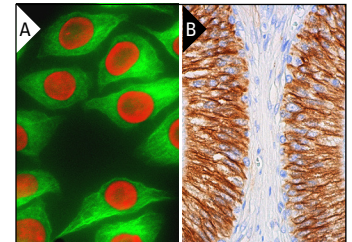
STORAGE

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

DATA



α Tubulin (TU-02): sc-8035. Western blot analysis of α Tubulin expression in NIH/3T3 (A), C2C12 (B), NAMALWA (C), A-673 (D), PC-12 (E) and C6 (F) whole cell lysates.



Lamin A/C (636) PE: sc-7292 PE and α Tubulin (TU-02) Alexa Fluor[®] 488: sc-8035 AF488. Direct immunofluorescence staining of formalin-fixed HeLa cells showing nuclear envelope (red) and cytoskeletal (green) localization (A). α Tubulin (TU-02) HRP: sc-8035 HRP. Direct immunoperoxidase staining of formalin fixed, paraffin-embedded human epididymis tissue showing cytoplasmic and membrane staining of glandular cells (B).

SELECT PRODUCT CITATIONS

- Liu, S.H., et al. 1999. Inhibition of inducible nitric oxide synthase by β -lapachone in rat alveolar macrophages and aorta. *Br. J. Pharmacol.* 126: 746-750.
- Di Rosa, M., et al. 2016. CHI3L1 nuclear localization in monocyte derived dendritic cells. *Immunobiology* 221: 347-356.
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- Ochs, F., et al. 2019. Stabilization of chromatin topology safeguards genome integrity. *Nature* 574: 571-574.
- Kapoor, A., et al. 2020. Endorepellin evokes an angiostatic stress signaling cascade in endothelial cells. *J. Biol. Chem.* 295: 6344-6356.
- Hong, X., et al. 2021. Effects of ER-resident and secreted AGR2 on cell proliferation, migration, invasion, and survival in PANC-1 pancreatic cancer cells. *BMC Cancer* 21: 33.
- Majuelos-Melguizo, J., et al. 2022. Glioblastoma cells counteract PARP inhibition through pro-survival induction of lipid droplets synthesis and utilization. *Cancers* 14: 726.
- Kang, M., et al. 2023. Targeting BAP1 with small compound inhibitor for colon cancer treatment. *Sci. Rep.* 13: 2264.

PROTOCOLS

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

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