

α Tubulin (TU-02): sc-8035

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. There are five β Tubulin isoforms ($\beta 1$, $\beta 2$, $\beta 3$, $\beta 4A$ and $\beta 4B$) that 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.

REFERENCES

- 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

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 either TRITC (sc-8035 TRITC, 200 μ g/ml), PerCP (sc-8035 PerCP), PerCP-Cy5.5 (sc-8035 PCPC5) or Alexa Fluor® 405 (sc-8035 AF405), 100 tests in 2 ml, for IF, IHC(P) and FCM.

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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.

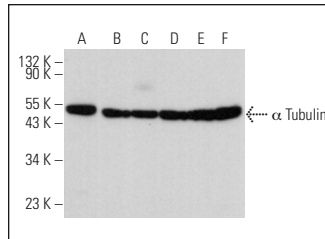
STORAGE

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

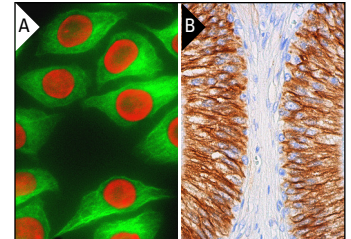
RESEARCH USE

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

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

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- Babagana, M., et al. 2017. P21-activated kinase 1 regulates resistance to BRAF inhibition in human cancer cells. *Mol. Carcinog.* 56: 1515-1525.
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- Yu, G., et al. 2017. MiR-519 suppresses nasopharyngeal carcinoma cell proliferation by targeting oncogene URG4/URGCP. *Life Sci.* 175: 47-51.

PROTOCOLS

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