

# $\alpha$ Tubulin (TU-02): sc-8035

## BACKGROUND

Tubulin is a major cytoskeleton component that has five distinct forms, designated  $\alpha$ ,  $\beta$ ,  $\gamma$ ,  $\delta$  and  $\epsilon$  Tubulin.  $\alpha$  and  $\beta$  Tubulins form heterodimers which multimerize to form a microtubule filament. Multiple  $\beta$  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.  $\gamma$  Tubulin forms the gammaosome, which is required for nucleating microtubule filaments at the centrosome. Both  $\delta$  Tubulin and  $\epsilon$  Tubulin are associated with the centrosome.  $\delta$  Tubulin is a homolog of the *Chlamydomonas*  $\delta$  Tubulin Uni3 and is found in association with the centrioles, whereas  $\epsilon$  Tubulin localizes to the pericentriolar material.  $\epsilon$  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

$\alpha$  Tubulin (TU-02) is a mouse monoclonal antibody raised against amino acids 1-451 representing full length  $\alpha$  Tubulin of porcine origin.

## PRODUCT

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

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

In addition,  $\alpha$  Tubulin (TU-02) is available conjugated to either TRITC (sc-8035 TRITC, 200  $\mu$ g/ml) or Alexa Fluor<sup>®</sup> 405 (sc-8035 AF405, 200  $\mu$ g/ml), 100 tests in 2 ml, for IF, IHC(P) and FCM.

## APPLICATIONS

$\alpha$  Tubulin (TU-02) is recommended for detection of  $\alpha$  Tubulin of mouse, rat, human and porcine origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ 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  $\mu$ g per  $1 \times 10^6$  cells) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Molecular Weight of  $\alpha$  Tubulin: 55 kDa.

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

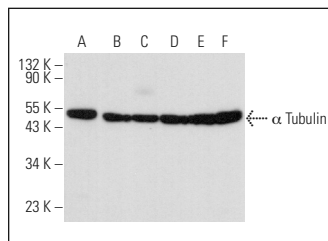
## RESEARCH USE

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

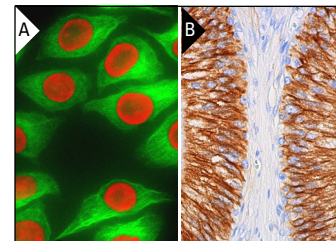
## STORAGE

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

## DATA



$\alpha$  Tubulin (TU-02): sc-8035. Western blot analysis of  $\alpha$  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  $\alpha$  Tubulin (TU-02) Alexa Fluor<sup>®</sup> 488: sc-8035 AF488. Direct immunofluorescence staining of formalin-fixed HeLa cells showing nuclear envelope (red) and cytoskeletal (green) localization (A).  $\alpha$  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  $\beta$ -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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- 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.
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- 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](http://www.scbt.com) for detailed protocols and support products.

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