

# α 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. There are five  $\beta$  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.  $\gamma$  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), PerCP (sc-8035 PerCP), PerCP-Cy5.5 (sc-8035 PCPC5) or Alexa Fluor<sup>®</sup> 405 (sc-8035 AF405), 100 tests in 2 ml, for IF, IHC(P) and FCM.

Alexa Fluor<sup>®</sup> is a trademark of Molecular Probes, Inc., Oregon, USA

## 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 x 10<sup>6</sup> 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.

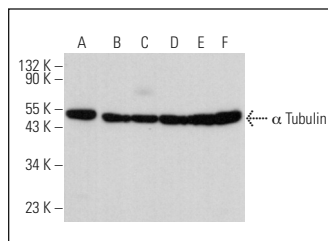
## RESEARCH USE

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

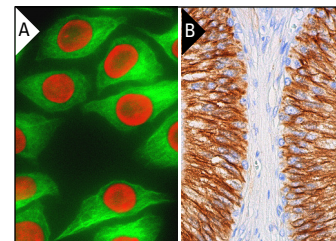
## STORAGE

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

- Zhang, L., et al. 2000. Role of BAX in the apoptotic response to anticancer agents. *Science* 290: 989-992.
- 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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- Zhao, X., et al. 2017. JNK1 negatively controls antifungal innate immunity by suppressing CD23 expression. *Nat. Med.* 23: 337-346.
- Biehls, R., et al. 2017. DNA double-strand break resection occurs during non-homologous end joining in G<sub>1</sub> but is distinct from resection during homologous recombination. *Mol. Cell* 65: 671-684.
- Qi, Z., et al. 2017. BMP restricts stemness of intestinal Lgr5<sup>+</sup> stem cells by directly suppressing their signature genes. *Nat. Commun.* 8: 13824.
- Marmisolle, I., et al. 2017. Reciprocal regulation of acetyl-CoA carboxylase 1 and senescence in human fibroblasts involves oxidant mediated p38 MAPK activation. *Arch. Biochem. Biophys.* 613: 12-22.
- Coni, S., et al. 2017. Selective targeting of HDAC1/2 elicits anticancer effects through Gli1 acetylation in preclinical models of SHH Medulloblastoma. *Sci. Rep.* 7: 44079.
- Wang, J., et al. 2017. Phosphorylation-dependent regulation of ALDH1A1 by Aurora kinase A: insights on their synergistic relationship in pancreatic cancer. *BMC Biol.* 15: 10.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.