

# $\alpha$ Tubulin (B-5-1-2): sc-23948

## 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 gamma-some, 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 (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  $\mu$ g IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

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

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

## APPLICATIONS

$\alpha$  Tubulin (B-5-1-2) is recommended for detection of  $\alpha$  Tubulin of multiple 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) and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for  $\alpha$  Tubulin siRNA (h): sc-29188,  $\alpha$  Tubulin siRNA (m): sc-29189,  $\alpha$  Tubulin shRNA Plasmid (h): sc-29188-SH,  $\alpha$  Tubulin shRNA Plasmid (m): sc-29189-SH,  $\alpha$  Tubulin shRNA (h) Lentiviral Particles: sc-29188-V and  $\alpha$  Tubulin shRNA (m) Lentiviral Particles: sc-29189-V.

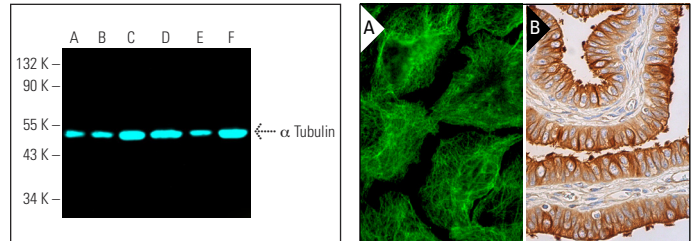
Molecular Weight of  $\alpha$  Tubulin: 55 kDa.

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



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

$\alpha$  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.
- Zhao, Y., et al. 2014. A novel wnt regulatory axis in endometrioid endometrial cancer. *Cancer Res.* 74: 5103-5117.
- Yu, J., et al. 2015. Pseudolaric acid B inhibits proliferation in SW579 human thyroid squamous cell carcinoma. *Mol. Med. Rep.* 12: 7195-7202.
- Yu, J., et al. 2016. Pseudolaric acid B activates autophagy in MCF-7 human breast cancer cells to prevent cell death. *Oncol. Lett.* 11: 1731-1737.
- Garzia, A., et al. 2017. The E3 ubiquitin ligase and RNA-binding protein ZNF598 orchestrates ribosome quality control of premature polyadenylated mRNAs. *Nat. Commun.* 8: 16056.
- Rehage, N., et al. 2018. Binding of NUFIP2 to Roquin promotes recognition and regulation of ICOS mRNA. *Nat. Commun.* 9: 299.
- Bartolini, D., et al. 2019. A seleno-hormetine protects bone marrow hematopoietic cells against ionizing radiation-induced toxicities. *PLoS ONE* 14: e0205626.
- Martínez-González, L., et al. 2020. Motor neuron preservation and decrease of *in vivo* TDP-43 phosphorylation by protein CK-1 $\delta$  kinase inhibitor treatment. *Sci. Rep.* 10: 4449.
- Bai, L., et al. 2021. Aberrant elevation of GDF8 impairs granulosa cell glucose metabolism via upregulating SERPINE1 expression in patients with PCOS. *Mol. Ther. Nucleic Acids* 23: 294-309.

## RESEARCH USE

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