

# α Tubulin (H-300): sc-5546

## 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.

## REFERENCES

- Weisenberg, R. 1981. Invited review: the role of nucleotide triphosphate in actin and tubulin assembly and function. *Cell Motil.* 1: 485-497.
- Hoffman, P.N. 1988. Distinct roles of neurofilament and tubulin gene expression in axonal growth. *Ciba Found. Symp.* 138: 192-204.

## SOURCE

$\alpha$  Tubulin (H-300) is a rabbit polyclonal antibody raised against amino acids 149-448 of  $\alpha$  Tubulin of human origin.

## PRODUCT

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

## APPLICATIONS

$\alpha$  Tubulin (H-300) is recommended for detection of  $\alpha$  Tubulin of broad mammalian species, *Drosophila melanogaster*, *Xenopus laevis* and zebrafish 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

$\alpha$  Tubulin (H-300) is also recommended for detection of  $\alpha$  Tubulin in additional species, including equine, canine, bovine and porcine.

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

Positive Controls:  $\alpha 3C$  Tubulin (h3): 293T Lysate: sc-158213, A-431 whole cell lysate: sc-2201 or HeLa whole cell lysate: sc-2200.

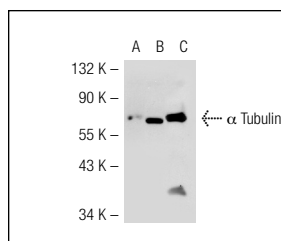
## STORAGE

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

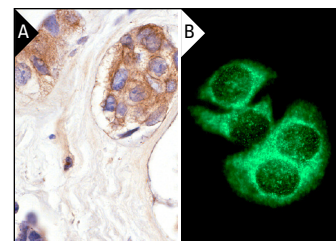
## RESEARCH USE

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

## DATA



$\alpha$  Tubulin (H-300): sc-5546. Western blot analysis of  $\alpha 3C$  Tubulin expression in non-transfected 293T: sc-117752 (A), human  $\alpha 3C$  Tubulin transfected 293T: sc-158213 (B) and HeLa (C) whole cell lysates.



$\alpha$  Tubulin (H-300): sc-5546. Immunoperoxidase staining of formalin-fixed, paraffin-embedded human breast tumor showing cytoplasmic localization (A). Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization (B).

## SELECT PRODUCT CITATIONS

- Ludde, T., et al. 2001. Ras adenoviruses modulate cyclin E protein expression and DNA synthesis after partial hepatectomy. *Oncogene* 20: 5264-5278.
- Latimer, J.J., et al. 2010. Nucleotide excision repair deficiency is intrinsic in sporadic stage I breast cancer. *Proc. Natl. Acad. Sci. USA* 107: 21725-21730.
- Cao, X., et al. 2011. WW domain-containing E3 ubiquitin protein ligase 1 (WWP1) delays cellular senescence by promoting p27(Kip1) degradation in human diploid fibroblasts. *J. Biol. Chem.* 286: 33447-33456.
- del Barco Barrantes, I., et al. 2011. Genetic analysis of specific and redundant roles for p38 $\alpha$  and p38 $\beta$  MAPKs during mouse development. *Proc. Natl. Acad. Sci. USA* 108: 12764-12769.
- Smith, W.C., et al. 2011. Interaction of arrestin with enolase1 in photoreceptors. *Invest. Ophthalmol. Vis. Sci.* 52: 1832-1840.
- Albajar, M., et al. 2011. MYC in chronic myeloid leukemia: induction of aberrant DNA synthesis and association with poor response to imatinib. *Mol. Cancer Res.* 9: 564-576.
- Tan, G., et al. 2012. MicroRNA-22 promotes cell survival upon UV radiation by repressing PTEN. *Biochem. Biophys. Res. Commun.* 417: 546-551.
- Teng, L., et al. 2012. Divergent effects of p47(phox) phosphorylation at S303-4 or S379 on tumor necrosis factor- $\alpha$  signaling via TRAF4 and MAPK in endothelial cells. *Arterioscler. Thromb. Vasc. Biol.* 32: 1488-1496.

**MONOS**  
Satisfaction  
Guaranteed

Try  **$\alpha$  Tubulin (TU-02): sc-8035** or  **$\alpha$  Tubulin (B-7): sc-5286**, our highly recommended monoclonal alternatives to  $\alpha$  Tubulin (H-300). Also, for AC, HRP, FITC, PE, Alexa Fluor<sup>®</sup> 488 and Alexa Fluor<sup>®</sup> 647 conjugates, see  **$\alpha$  Tubulin (TU-02): sc-8035**.