

α Tubulin (P-16): sc-31779

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. Multiple β Tubulin isoforms (β 1, β 2, β 3, β 4, β 5, β 6 and β 8) have been characterized and are expressed in mammalian tissues. β 1 and β 4 are present throughout the cytosol, β 2 is present in the nuclei and nucleoplasm, and β 3 is a neuron-specific cytoskeletal protein. γ Tubulin forms the gamma-some, 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.C. 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

α Tubulin (P-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of α Tubulin of human origin.

PRODUCT

Each vial contains 100 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-31779 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

α Tubulin (P-16) is recommended for detection of α Tubulin of mouse, rat and human 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

α Tubulin (P-16) is also recommended for detection of α Tubulin in additional species, including equine, canine, bovine, porcine and avian.

Molecular Weight of α Tubulin: 55 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, A-431 whole cell lysate: sc-2201 or K-562 whole cell lysate: sc-2203.

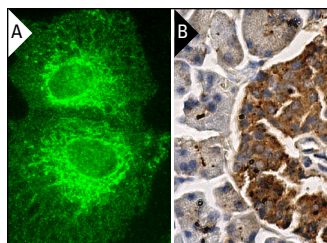
STORAGE

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 (P-16): sc-31779. Immunofluorescence staining of formalin-fixed HepG2 cells showing cytoskeleton localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human pancreas tissue showing cytoplasmic staining of glomerular cells (B).

SELECT PRODUCT CITATIONS

- Zhong, S.C., et al. 2010. Expression and subcellular location of α -synuclein during mouse-embryonic development. *Cell. Mol. Neurobiol.* 30: 469-482.
- Daskalos, A., et al. 2011. UHRF1-mediated tumor suppressor gene inactivation in nonsmall cell lung cancer. *Cancer* 117: 1027-1037.
- Skirzewski, M., et al. 2011. Enhanced GABAergic tone in the ventral pallidum: memory of unpleasant experiences? *Neuroscience* 196: 131-146.
- Grdovic, N., et al. 2012. The protective effect of a mix of *Lactarius deterrimus* and *Castanea sativa* extracts on streptozotocin-induced oxidative stress and pancreatic β -cell death. *Br. J. Nutr.* 108: 1163-1176.
- Madan, E., et al. 2013. SCO2 induces p53-mediated apoptosis by Thr845 phosphorylation of ASK-1 and dissociation of the ASK-1-Trx complex. *Mol. Cell. Biol.* 33: 1285-1302.
- Ismail, Y., et al. 2013. The effects of oral and enteric *Campylobacter concisus* strains on expression of TLR4, MD-2, TLR2, TLR5 and COX-2 in HT-29 cells. *PLoS ONE* 8: e56888.
- Madan, E., et al. 2013. SCO2 induces p53-mediated apoptosis by Thr845 phosphorylation of ASK-1 and dissociation of the ASK-1-Trx complex. *Mol. Cell. Biol.* 33: 1285-1302.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.



Try α Tubulin (TU-02): sc-8035 or α Tubulin (B-7): sc-5286, our highly recommended monoclonal alternatives to α Tubulin (P-16). Also, for AC, HRP, FITC, PE, Alexa Fluor[®] 488 and Alexa Fluor[®] 647 conjugates, see α Tubulin (TU-02): sc-8035.