

α Tubulin (E-19)-R: sc-12462-R

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. There are five β 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. 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.

SOURCE

α Tubulin (E-19)-R is an affinity purified rabbit polyclonal antibody raised against a peptide mapping near the N-terminus of α Tubulin of human origin.

PRODUCT

Each vial contains 200 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-12462 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

α Tubulin (E-19)-R is recommended for detection of α Tubulin of mouse, rat, human, *Drosophila melanogaster*, *Xenopus laevis*, zebrafish and *C. elegans* 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

α Tubulin (E-19)-R is also recommended for detection of α Tubulin in additional species, including equine, canine, bovine, porcine and avian.

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

Molecular Weight of α Tubulin: 55 kDa.

Positive Controls: NIH/3T3 whole cell lysate: sc-2210, MCF7 whole cell lysate: sc-2206 or PC-12 cell lysate: sc-2250.

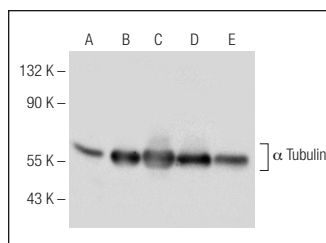
STORAGE

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

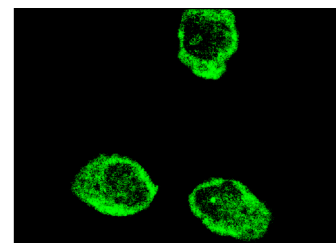
RESEARCH USE

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

DATA



α Tubulin (E-19)-R: sc-12462-R. Western blot analysis of α Tubulin expression in NIH/3T3 (A), PC-12 (B), KNRK (C), MCF7 (D) and A549 (E) whole cell lysates.



α Tubulin (E-19): sc-12462. Immunofluorescence staining of methanol-fixed A-431 cells showing cytoplasmic staining.

SELECT PRODUCT CITATIONS

1. Lahuna, O., et al. 2005. Thyrotropin receptor trafficking relies on the hScrib- β PIX-GIT1-ARF6 pathway. *EMBO J.* 24: 1364-1374.
2. Lin, M.T., et al. 2005. Cyr61 induces gastric cancer cell motility/invasion via activation of the integrin/nuclear factor- κ B/cyclooxygenase-2 signaling pathway. *Clin. Cancer Res.* 11: 5809-5820.
3. Balbach, S.T., et al. 2007. Chromosome stability differs in cloned mouse embryos and derivative ES cells. *Dev. Biol.* 308: 309-321.
4. Woo, S.Y., et al. 2007. PRR5, a novel component of mTOR complex 2, regulates platelet-derived growth factor receptor β expression and signaling. *J. Biol. Chem.* 282: 25604-25612.
5. Jung, C.H., et al. 2009. ULK-Atg13-FIP200 complexes mediate mTOR signaling to the autophagy machinery. *Mol. Biol. Cell* 20: 1992-2003.
6. Gies, E., et al. 2010. Niclosamide prevents the formation of large ubiquitin-containing aggregates caused by proteasome inhibition. *PLoS ONE* 5: e14410.
7. Yen, Y.H., et al. 2011. A study of the spatial protein organization of the postsynaptic density isolated from porcine cerebral cortex and cerebellum. *Mol. Cell. Proteomics* E-published.

PROTOCOLS

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