SANTA CRUZ BIOTECHNOLOGY, INC.

α Tubulin (6A204): sc-69969



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 gammasome, 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 centroles, 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

- 1. Weisenberg, R. 1981. Invited review: the role of nucleotide triphosphate in Actin and Tubulin assembly and function. Cell Motil. 1: 485-497.
- Burns, R.G. 1991. α-, β-, and γ-Tubulins: sequence comparisons and structural constraints. Cell Motil. Cytoskeleton 20: 181-189.

SOURCE

 α Tubulin (6A204) is a mouse monoclonal antibody raised against Sarkosyl-resistant ribbons from sperm axonemes of *Strongylocentrotus purpuratus* (sea urchin) origin.

PRODUCT

Each vial contains 200 $\mu g\, lg G_1$ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

α Tubulin (6A204) is recommended for detection of α Tubulin of multiple origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μg per 100-500 μg 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 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: K-562 whole cell lysate: sc-2203, PC-12 cell lysate: sc-2250 or HL-60 whole cell lysate: sc-2209.

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 (6A204): sc-69969. Western blot analysis of α Tubulin expression in K-562 (A), PC-12 (B), HL-60 (C), C2C12 (D) and Hep G2 (E) whole cell lysates.



 α Tubulin (6A204): sc-69969. Immunofluorescence staining of formalin-fixed A-431 cells showing cytoskeletal localization (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human testis tissue showing cytoplasmic and membrane staining of cells in seminiferous ducts (**B**).

SELECT PRODUCT CITATIONS

- Krejcova, D., et al. 2009. Modulation of cell proliferation and differentiation of human lung carcinoma cells by the interferon-α. Gen. Physiol. Biophys. 28: 294-301.
- Miyata, M., et al. 2015. Glucocorticoids suppress inflammation via the upregulation of negative regulator IRAK-M. Nat. Commun. 6: 6062.
- Li, J., et al. 2016. Autophagy mediates oral submucous fibrosis. Exp. Ther. Med. 11: 1859-1864.
- Kim, H.R., et al. 2017. MicroRNA-1908-5p contributes to the oncogenic function of the splicing factor SRSF3. Oncotarget 8: 8342-8355.
- Lee, B.C., et al. 2018. Visfatin promotes wound healing through the activation of ERK1/2 and JNK1/2 pathway. Int. J. Mol. Sci. 19: 3642.
- Wang, X., et al. 2019. Function of low ADARB1 expression in lung adenocarcinoma. PLoS ONE 14: e0222298.
- Gao, R., et al. 2020. Mep1A enhances TNFα secretion by mast cells and aggravates abdominal aortic aneurysms. Br. J. Pharmacol. 177: 2872-2885.
- 8. Xu, G., et al. 2021. The deubiquitinase USP16 functions as an oncogenic factor in K-RAS-driven lung tumorigenesis. Oncogene 40: 5482-5494.
- 9. Pagano Zottola, A.C., et al. 2022. Expression of functional cannabinoid type-1 (CB1) receptor in mitochondria of white adipocytes. Cells 11: 2582.
- Kases, K., et al. 2023. The RNA-binding protein ZC3H11A interacts with the nuclear poly(A)-binding protein PABPN1 and alters polyadenylation of viral transcripts. J. Biol. Chem. 299: 104959.
- Yasuoka, Y., et al. 2024. Tubular endogenous erythropoietin protects renal function against ischemic reperfusion injury. Int. J. Mol. Sci. 25: 1223.

PROTOCOLS

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