

α 1a Tubulin (7-RY28): sc-134237

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 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.

CHROMOSOMAL LOCATION

Genetic locus: TUBA1A (human) mapping to 12q13.12; Tuba1a (mouse) mapping to 15 F1.

SOURCE

α 1a Tubulin (7-RY28) is a mouse monoclonal antibody raised against amino acids 352-451 of α 1a Tubulin protein of human origin.

PRODUCT

Each vial contains 100 μ g IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

α 1a Tubulin (7-RY28) is recommended for detection of α 1a Tubulin and 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)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

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 1a Tubulin: 50 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227, Ramos cell lysate: sc-2216 or HeLa whole cell lysate: sc-2200.

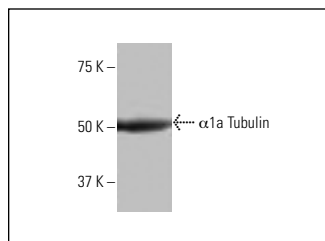
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

STORAGE

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

DATA



α 1a Tubulin (7-RY28): sc-134237. Western blot analysis of α 1a Tubulin expression in Hep G2 whole cell lysate.

SELECT PRODUCT CITATIONS

- Xiong, S., et al. 2017. Activation of transient receptor potential melastatin subtype 8 attenuates cold-induced hypertension through ameliorating vascular mitochondrial dysfunction. *J. Am. Heart Assoc.* 6: e005495.
- Jin, M., et al. 2018. Anti-neuroinflammatory effect of curcumin on Pam3CSK4-stimulated microglial cells. *Int. J. Mol. Med.* 41: 521-530.
- Yu, Y., et al. 2018. Anti-inflammatory effects of curcumin in microglial cells. *Front. Pharmacol.* 9: 386.
- Gao, Q., et al. 2019. Integrated proteogenomic characterization of HBV-related hepatocellular carcinoma. *Cell* 179: 561-577.e22.
- Wang, H., et al. 2019. Effects of histone deacetylase inhibitors on ATP-binding cassette transporters in lung cancer A549 and colorectal cancer HCT116 cells. *Oncol. Lett.* 18: 63-71.
- Huang, C.C., et al. 2019. Dietary delphinidin inhibits human colorectal cancer metastasis associating with upregulation of miR-204-3p and suppression of the integrin/FAK axis. *Sci. Rep.* 9: 18954.
- Raymundi, A.M., et al. 2020. A time-dependent contribution of hippocampal CB1, CB2, and PPAR γ receptors to cannabidiol-induced disruption of fear memory consolidation. *Br. J. Pharmacol.* 177: 945-957.
- Shi, B., et al. 2020. Effect of sodium butyrate on ABC transporters in lung cancer A549 and colorectal cancer HCT116 cells. *Oncol. Lett.* 20: 148.
- Yu, S., et al. 2020. Pyrrolidine dithiocarbamate facilitates arsenic trioxide against pancreatic cancer via perturbing ubiquitin-proteasome pathway. *Cancer Manag. Res.* 12: 13149-13159.
- Wu, Y., et al. 2020. Chronic resistance exercise improves functioning and reduces Toll-like receptor signaling in elderly patients with postoperative deconditioning. *J. Manipulative Physiol. Ther.* 43: 371-383.
- Hausrat, T.J., et al. 2020. α - and β -Tubulin isotypes are differentially expressed during brain development. *Dev. Neurobiol.* E-published.

RESEARCH USE

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