

α 1c Tubulin (MH-87): sc-134239

BACKGROUND

Tubulin exists as five distinct forms, designated α , β , γ , δ and ϵ , all of which function as critical components of the cytoskeleton, specifically forming heterodimers which multimerize to produce microtubule filaments. α 1c Tubulin, also known as TUBA1C or TUBA6, is a 449 amino acid protein that exists as a dimer of α and β chains and belongs to the Tubulin family of cytoskeletal proteins. Like other members of the Tubulin family, α 1c Tubulin exists as a major component of microtubules and functions to bind two moles of GTP, one at a non-exchangeable site on its α chain and one at an exchangeable site on its β chain. α 1c Tubulin is subject to a post-translational tyrosination/detyrosination cycle in which C-terminal tyrosine residues are added and removed by specific enzymes.

REFERENCES

1. Watts, N.R., et al. 2000. HIV-1 Rev depolymerizes microtubules to form stable bilayered rings. *J. Cell Biol.* 150: 349-360.
2. Rush, J., et al. 2005. Immunoaffinity profiling of tyrosine phosphorylation in cancer cells. *Nat. Biotechnol.* 23: 94-101.
3. de Mareuil, J., et al. 2005. HIV-1 Tat protein enhances microtubule polymerization. *Retrovirology* 2: 5.
4. Giacca, M. 2005. HIV-1 Tat, apoptosis and the mitochondria: a Tubulin link? *Retrovirology* 2: 7.

CHROMOSOMAL LOCATION

Genetic locus: TUBA1C (human) mapping to 12q13.12; Tuba1c (mouse) mapping to 15 F1.

SOURCE

α 1c Tubulin (MH-87) is a mouse monoclonal antibody raised against recombinant α 1c Tubulin protein of human origin.

PRODUCT

Each vial contains 100 μ g IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

α 1c Tubulin (MH-87) is recommended for detection of α 1c 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) 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.

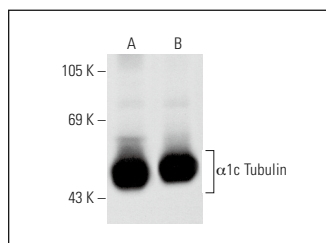
Molecular Weight of α 1c Tubulin: 50 kDa.

Positive Controls: A-431 whole cell lysate: sc-2201 or HeLa whole cell lysate: sc-2200.

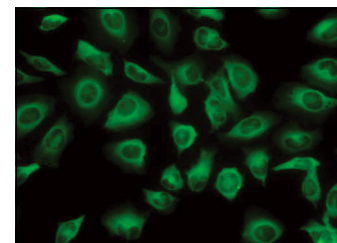
RECOMMENDED SUPPORT REAGENTS

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). 3) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



α 1c Tubulin (MH-87): sc-134239. Western blot analysis of α 1c Tubulin expression in HeLa (A) and A-431 (B) whole cell lysates.



α 1c Tubulin (MH-87): sc-134239. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic and membrane localization.

SELECT PRODUCT CITATIONS

1. Kello, M., et al. 2014. ROS-dependent antiproliferative effect of brassinin derivative homobrassinin in human colorectal cancer Caco2 cells. *Molecules* 19: 10877-10897.
2. Guh, C.Y., et al. 2022. XPF activates break-induced telomere synthesis. *Nat. Commun.* 13: 5781.
3. Herbel, S.M., et al. 2022. Screening for eukaryotic motifs in *Legionella pneumophila* reveals Smh1 as bacterial deacetylase of host histones. *Virulence* 13: 2042-2058.
4. Tsai, R.X., et al. 2022. TERRA regulates DNA G-quadruplex formation and ATRX recruitment to chromatin. *Nucleic Acids Res.* 50: 12217-12234.
5. Dong, G., et al. 2023. Palmitoylation couples insulin hypersecretion with β cell failure in diabetes. *Cell Metab.* 35: 332-344.e7.
6. Laakmann, K., et al. 2023. Bacterial extracellular vesicles repress the vascular protective factor RNase1 in human lung endothelial cells. *Cell Commun. Signal.* 21: 111.

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.