SANTA CRUZ BIOTECHNOLOGY, INC.

α1c Tubulin (MH-87): sc-134239

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The Power to Question

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. α1c 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, α1c 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. α1c 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.
5. Frum, R., et al. 2007. HDM2-binding partners: interaction with translation elongation factor EF1α. J. Proteome Res. 6: 1410-1417.
6. Daub, H., et al. 2008. Kinase-selective enrichment enables quantitative phosphoproteomics of the kinome across the cell cycle. Mol. Cell 31: 438-448.
7. Dephoure, N., et al. 2008. A quantitative atlas of mitotic phosphorylation. Proc. Natl. Acad. Sci. USA 105: 10762-10767.

CHROMOSOMAL LOCATION

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

SOURCE

α1c Tubulin (MH-87) is a mouse monoclonal antibody raised against recombinant α1c Tubulin protein of human origin.

PRODUCT

Each vial contains 100 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

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

PROTOCOLS

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

APPLICATIONS

α1c Tubulin (MH-87) is recommended for detection of α1c Tubulin of mouse, rat and human 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 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.

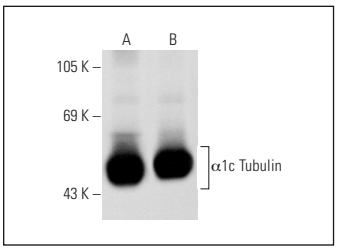
Molecular Weight of α1c Tubulin: 50 kDa.

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

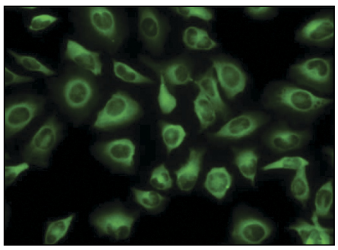
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ 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-IgGκ BP-FITC: sc-516140 or m-IgGκ 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



α1c Tubulin (MH-87): sc-134239. Western blot analysis of α1c Tubulin expression in HeLa (**A**) and A-431 (**B**) whole cell lysates.



α1c 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.

RESEARCH USE

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