

γ Tubulin (TU-30): sc-51715

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 ($\beta 1$, $\beta 2$, $\beta 3$, $\beta 4$, $\beta 5$, $\beta 6$ and $\beta 8$) have been characterized and 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 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: TUBG1/TUBG2 (human) mapping to 17q21.2; Tubg1/Tubg2 (mouse) mapping to 11 D.

SOURCE

γ Tubulin (TU-30) is a mouse monoclonal antibody raised against the C-terminus of γ Tubulin of human origin.

PRODUCT

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

APPLICATIONS

γ Tubulin (TU-30) is recommended for detection of γ Tubulin of mouse, rat, human and porcine 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 immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for γ Tubulin siRNA (h): sc-29322, γ Tubulin siRNA (m): sc-29323, γ Tubulin shRNA Plasmid (h): sc-29322-SH, γ Tubulin shRNA Plasmid (m): sc-29323-SH, γ Tubulin shRNA (h) Lentiviral Particles: sc-29322-V and γ Tubulin shRNA (m) Lentiviral Particles: sc-29323-V.

Molecular Weight of γ Tubulin: 50 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203, A-431 whole cell lysate: sc-2201 or KNRK whole cell lysate: sc-2214.

STORAGE

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

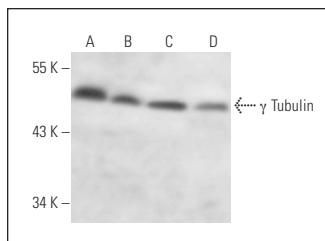
PROTOCOLS

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

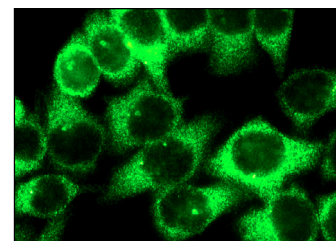
RESEARCH USE

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

DATA



γ Tubulin (TU-30): sc-51715. Western blot analysis of γ Tubulin expression in A-431 (A), K-562 (B), KNRK (C) and MCF7 (D) whole cell lysates.



γ Tubulin (TU-30): sc-51715. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization.

SELECT PRODUCT CITATIONS

- Mi, L., et al. 2009. Aggresome-like structure induced by isothiocyanates is novel proteasome-dependent degradation machinery. *Biochem. Biophys. Res. Commun.* 388: 456-462.
- Hoffmeister, H., et al. 2011. Polycystin-2 takes different routes to the somatic and ciliary plasma membrane. *J. Cell Biol.* 192: 631-645.
- Rodríguez de la Vega Otazo, M., et al. 2013. Functional segregation and emerging role of cilia-related cytosolic carboxypeptidases (CCPs). *FASEB J.* 27: 424-431.
- Douthwright, S. and Sluder, G. 2014. Link between DNA damage and centriole disengagement/reduplication in untransformed human cells. *J. Cell. Physiol.* 229: 1427-1436.
- Pillai, S., et al. 2015. Tank binding kinase 1 is a centrosome-associated kinase necessary for microtubule dynamics and mitosis. *Nat. Commun.* 6: 10072.
- Kawai, M., et al. 2015. Midostaurin preferentially attenuates proliferation of triple-negative breast cancer cell lines through inhibition of Aurora kinase family. *J. Biomed. Sci.* 22: 48.
- Rosselló, C.A., et al. 2016. γ Tubulin coordinates nuclear envelope assembly around chromatin. *Heliyon* 2: e00166.
- Mazo, G., et al. 2016. Spatial control of primary ciliogenesis by subdistal appendages alters sensation-associated properties of cilia. *Dev. Cell* 39: 424-437.
- Fong, C.S., et al. 2016. 53BP1 and USP28 mediate p53-dependent cell cycle arrest in response to centrosome loss and prolonged mitosis. *eLife* 5: e16270.

CONJUGATES

See **γ Tubulin (C-11): sc-17787** for γ Tubulin antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor[®] 488, 546, 594, 647, 680 and 790.