SANTA CRUZ BIOTECHNOLOGY, INC.

γ Tubulin (C-11): sc-17787

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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. There are five β Tubulin isoforms (β1, β2, β3, β4A and β4B) that are expressed in mammalian tissues. β1 and β4 are present throughout the cytosol, β2 is present in the nuclei and nucleoplasm, and β3 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 (C-11) is a mouse monoclonal antibody raised against amino acids 269-451 of γ Tubulin of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

γ Tubulin (C-11) is available conjugated to agarose (sc-17787 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-17787 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-17787 PE), fluorescein (sc-17787 FITC), Alexa Fluor® 488 (sc-17787 AF488), Alexa Fluor® 546 (sc-17787 AF546), Alexa Fluor® 594 (sc-17787 AF594) or Alexa Fluor® 647 (sc-17787 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-17787 AF680) or Alexa Fluor® 790 (sc-17787 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA

APPLICATIONS

γ Tubulin (C-11) is recommended for detection of γ Tubulin of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:200-1:2,000), 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

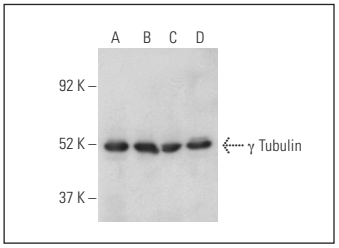
Suitable for use as control antibody for γ Tubulin siRNA (h): sc-29322, γ Tubulin siRNA (m): sc-29323, γ Tubulin shRNA Plasmid (h): sc-29322-SH, γ Tubulin shRNA Plasmid (m): sc-29323-SH, γ Tubulin shRNA (h) Lentiviral Particles: sc-29322-V and γ Tubulin shRNA (m) Lentiviral Particles: sc-29323-V.

Molecular Weight of γ Tubulin: 50 kDa.

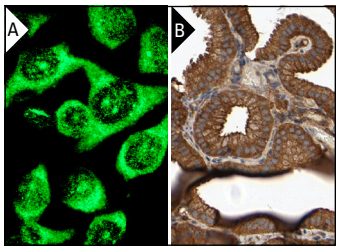
STORAGE

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

DATA



γ Tubulin (C-11): sc-17787. Western blot analysis of γ Tubulin expression in HeLa (**A**), Jurkat (**B**), K-562 (**C**) and A-431 (**D**) whole cell lysates. Detection reagent used: m-IgG Fc BP-HRP: sc-525409.



γ Tubulin (C-11): sc-17787. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic staining (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human gall bladder tissue showing cytoplasmic staining of glandular cells. Kindly provided by The Swedish Human Protein Atlas (HPA) program (**B**).

SELECT PRODUCT CITATIONS

1. Hau, P.M., et al. 2006. Polyploidization increases the sensitivity to DNA-damaging agents in mammalian cells. FEBS Lett. 580: 4727-4736.
2. Rogers, S., et al. 2015. Cyclin E2 is the predominant E-cyclin associated with NPAT in breast cancer cells. Cell Div. 10: 1.
3. De Martino, M., et al. 2016. HMGA1P7-pseudogene regulates H19 and Igf2 expression by a competitive endogenous RNA mechanism. Sci. Rep. 6: 37622.
4. Jiao, X.F., et al. 2017. Abce1 orchestrates M-phase entry and cytoskeleton architecture in mouse oocyte. Oncotarget 8: 39012-39020.
5. Klein, M.E., et al. 2018. PDLIM7 and CDH18 regulate the turnover of MDM2 during CDK4/6 inhibitor therapy-induced senescence. Oncogene 37: 5066-5078.
6. Gupta, D.K., et al. 2019. Septin and Ras regulate cytokinetic abscission in detached cells. Cell Div. 14: 8.
7. De Martino, M., et al. 2020. Characterization of HMGA1P6 transgenic mouse embryonic fibroblasts. Cell Cycle 19: 2281-2285.
8. Canu, V., et al. 2021. Aberrant transcriptional and post-transcriptional regulation of SPAG5, a YAP-TAZ-TEAD downstream effector, fuels breast cancer cell proliferation. Cell Death Differ. 28: 1493-1511.
9. Chien, Y.H., et al. 2022. Mechanical strain breaks planar symmetry in embryonic epithelia via polarized microtubules. Cells Dev. 170: 203791.
10. Yoon, H., et al. 2023. Hydrogen peroxide inhibits hepatitis B virus replication by downregulating HBx levels via Siah-1-mediated proteasomal degradation in human hepatoma cells. Int. J. Mol. Sci. 24: 13354.

RESEARCH USE

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