

#5886 Store at -20C

γ -Tubulin Antibody


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For Research Use Only. Not for Use in Diagnostic Procedures.

Applications: WB	Reactivity: H M R Mk	Sensitivity: Endogenous	MW (kDa): 50	Source: Rabbit	UniProt ID: #P23258	Entrez-Gene Id: 7283
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Product Usage Information	Application Western Blotting	Dilution 1:1000
Storage	Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at –20°C. Do not aliquot the antibody.	
Specificity / Sensitivity	γ -Tubulin Antibody recognizes endogenous levels of total γ -tubulin protein.	
Source / Purification	Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues near the carboxy terminus of human γ -tubulin protein. Antibodies are purified by protein A and peptide affinity chromatography.	
Background	<p>Globular tubulin subunits comprise the microtubule building block, with α/β-tubulin heterodimers forming the tubulin subunit common to all eukaryotic cells. As a critical part of the microtubule-organizing center (MTOC), the third member of the tubulin superfamily, γ-tubulin, is required for microtubule nucleation as well as centrosome duplication and spindle assembly (1,2, reviewed in 3). γ-tubulin forms complexes of two different sizes: γ-tubulin small complex (γ-TuSC) and the larger γ-tubulin ring complex (γ-TuRC). Each complex consists of a number of γ-tubulin complex proteins (GCPs) with γ-tubulin itself being considered GCP1. GCP2-6 all share sequence similarity in 5 different regions and it is thought that these areas could play a role in the proper folding of the proteins (4). γ-TuSC is composed of two γ-tubulin molecules as well as GCP2 and GCP3. γ-TuRC is made up of a ring of multiple copies of γ-TuSC in addition to GCP4, 5, and 6. Another protein, GCP-WD/NEDD1, which lacks sequence similarity with the other GCPs, associates with the γ-TuRC. GCP-WD/NEDD1 has been shown to regulate localization of the γ-TuSC to spindles and centrosomes (5-8). In mammals, phosphorylation of γ-tubulin at Ser131 by SADB controls the activity of the γ-TuRC. The hypothesis is that this phosphorylation stabilizes the protein in a conformation that stimulates centrosome amplification (9).</p>	
Background References	<ol style="list-style-type: none"> 1. Westermann, S. and Weber, K. (2003) <i>Nat Rev Mol Cell Biol</i> 4, 938-47. 2. Loncarek, J. and Khodjakov, A. (2009) <i>Mol Cells</i> 27, 135-42. 3. Wiese, C. and Zheng, Y. (2006) <i>J Cell Sci</i> 119, 4143-53. 4. Murphy, S.M. et al. (2001) <i>Mol Biol Cell</i> 12, 3340-52. 5. Raynaud-Messina, B. and Merdes, A. (2007) <i>Curr Opin Cell Biol</i> 19, 24-30. 6. Schiebel, E. (2000) <i>Curr Opin Cell Biol</i> 12, 113-8. 7. Lüders, J. et al. (2006) <i>Nat Cell Biol</i> 8, 137-47. 8. Haren, L. et al. (2009) <i>PLoS One</i> 4, e5976. 9. Alvarado-Kristensson, M. et al. (2009) <i>Nat Cell Biol</i> 11, 1081-92. 	

Species Reactivity	Species reactivity is determined by testing in at least one approved application (e.g., western blot).
Western Blot Buffer	IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.
Applications Key	WB: Western Blotting
Cross-Reactivity Key	H: human M: mouse R: rat Hm: hamster Mk: monkey Vir: virus Mi: mink C: chicken Dm: D. melanogaster X: Xenopus Z: zebrafish B: bovine Dg: dog Pg: pig Sc: S. cerevisiae Ce: C. elegans Hr: horse GP: Guinea Pig Rab: rabbit All: all species expected
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