

γ -Tubulin Antibody



Orders: 877-616-CELL (2355)
orders@cellsignal.com

Support: 877-678-TECH (8324)

Web: info@cellsignal.com
cellsignal.com

3 Trask Lane | Danvers | Massachusetts | 01923 | USA

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

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W	H M R Mk	Endogenous	50	Rabbit	#P23258	7283

Product Usage Information

Application

Western Blotting

Dilution

1:1000

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 μ g/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

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 SAD6 controls the activity of the γ -TuRC. The hypothesis is that this phosphorylation stabilizes the protein in a conformation that stimulates centrosome amplification (9).

Background References

1. Westermann, S. and Weber, K. (2003) *Nat Rev Mol Cell Biol* 4, 938-47.
2. Loncarek, J. and Khodjakov, A. (2009) *Mol Cells* 27, 135-42.
3. Wiese, C. and Zheng, Y. (2006) *J Cell Sci* 119, 4143-53.
4. Murphy, S.M. et al. (2001) *Mol Biol Cell* 12, 3340-52.
5. Raynaud-Messina, B. and Merdes, A. (2007) *Curr Opin Cell Biol* 19, 24-30.
6. Schiebel, E. (2000) *Curr Opin Cell Biol* 12, 113-8.
7. Lüders, J. et al. (2006) *Nat Cell Biol* 8, 137-47.
8. Haren, L. et al. (2009) *PLoS One* 4, e5976.
9. Alvarado-Kristensson, M. et al. (2009) *Nat Cell Biol* 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

W: Western Blotting

Cross-Reactivity Key

H: Human **M:** Mouse **R:** Rat **Mk:** Monkey

Trademarks and Patents

Cell Signaling Technology is a trademark of Cell Signaling Technology, Inc.

All other trademarks are the property of their respective owners. Visit cellsignal.com/trademarks for more information.

Limited Uses

Except as otherwise expressly agreed in a writing signed by a legally authorized representative of CST, the following terms apply to Products provided by CST, its affiliates or its distributors. Any Customer's terms and conditions that are in addition to, or different from, those contained herein, unless separately accepted in writing by a legally authorized representative of CST, are rejected and are of no force or effect.

Products are labeled with For Research Use Only or a similar labeling statement and have not been approved, cleared, or licensed by the FDA or other regulatory foreign or domestic entity, for any purpose. Customer shall not use any Product for any diagnostic or therapeutic purpose, or otherwise in any manner that conflicts with its labeling statement. Products sold or licensed by CST are provided for Customer as the end-user and solely for research and development uses. Any use of Product for diagnostic, prophylactic or therapeutic purposes, or any purchase of Product for resale (alone or as a component) or other commercial purpose, requires a separate license from CST. Customer shall (a) not sell, license, loan, donate or otherwise transfer or make available any Product to any third party, whether alone or in combination with other materials, or use the Products to manufacture any commercial products, (b) not copy, modify, reverse engineer, decompile, disassemble or otherwise attempt to discover the underlying structure or technology of the Products, or use the Products for the purpose of developing any products or services that would compete with CST products or services, (c) not alter or remove from the Products any trademarks, trade names, logos, patent or copyright notices or markings, (d) use the Products solely in accordance with CST Product Terms of Sale and any applicable documentation, and (e) comply with any license, terms of service or similar agreement with respect to any third party products or services used by Customer in connection with the Products.