

#3971 Store at -20C

Acetyl- α -Tubulin (Lys40) Antibody

**Cell Signaling**
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For Research Use Only. Not for Use in Diagnostic Procedures.

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source:	UniProt ID:	Entrez-Gene Id:
WB	H M R	Endogenous	52	Rabbit	#P68363	10376

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	Acetyl- α -Tubulin (Lys40) Antibody detects endogenous levels of tubulin only when acetylated at Lys40. This amino acid is not conserved in β -tubulin.	
Source / Purification	Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Lys40 of human α -tubulin. Antibodies are purified by protein A and peptide affinity chromatography.	
Background	<p>The cytoskeleton consists of three types of cytosolic fibers: microtubules, microfilaments (actin filaments), and intermediate filaments. Globular tubulin subunits comprise the microtubule building block, with α/β-tubulin heterodimers forming the tubulin subunit common to all eukaryotic cells. γ-tubulin is required to nucleate polymerization of tubulin subunits to form microtubule polymers. Many cell movements are mediated by microtubule action, including the beating of cilia and flagella, cytoplasmic transport of membrane vesicles, chromosome alignment during meiosis/mitosis, and nerve-cell axon migration. These movements result from competitive microtubule polymerization and depolymerization or through the actions of microtubule motor proteins (1).</p> <p>The Elongator complex catalytic subunit (Elp3) acetylates α-tubulin at Lys40 while the histone deacetylase HDAC6 functions as a tubulin deacetylase. This post-transcriptional modification may be required for dynamic cell shape remodeling, cell motility, tubulin stability and terminal branching of cortical neurons (2-3).</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. Creppe, C. et al. (2009) <i>Cell</i> 136, 551-564. 3. Hubbert, C. et al. (2002) <i>Nature</i> 417, 455-458. 	

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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