

#14652 Store at -20°C

Acetyl- α -Tubulin (Lys40) (D20G3) XP® Rabbit mAb (HRP Conjugate)


Cell Signaling
TECHNOLOGY®

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

Product Usage Information	Application	Dilution
	Western Blotting	1:1000
Storage	Supplied in 136 mM NaCl, 2.6 mM KCl, 12 mM sodium phosphate (pH 7.4) dibasic, 2 mg/ml BSA, and 50% glycerol. Store at -20°C. Do not aliquot the antibodies.	
Specificity / Sensitivity	Acetyl- α -Tubulin (Lys40) (D20G3) XP® Rabbit mAb (HRP Conjugate) detects endogenous levels of α -tubulin only when acetylated at Lys40. This amino acid is not conserved in β -tubulin.	
Species predicted to react based on 100% sequence homology:	Xenopus	
Source / Purification	Monoclonal antibody is produced by immunizing animals with a synthetic acetylpeptide corresponding to residues surrounding Lys40 of human α -tubulin protein.	
Product Description	This Cell Signaling Technology antibody is conjugated to the carbohydrate groups of horseradish peroxidase (HRP) via its amine groups. The HRP conjugated antibody is expected to exhibit the same species cross-reactivity as the unconjugated Acetyl- α -Tubulin (Lys40) (D20G3) XP® Rabbit mAb #5335.	

MW (kDa)

52

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, 551-64. 3. Hubbert, C. et al. (2002) <i>Nature</i> 417, 455-8.

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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