

Store at
-20C
#14652**Acetyl- α -Tubulin (Lys40) (D20G3) XP[®]
Rabbit mAb (HRP Conjugate)****Orders:** 877-616-CELL (2355)
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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 Z | Endogenous | 52 | Rabbit IgG | #P68363 | 10376 |

Product Usage Information**Application**

Western Blotting

Dilution

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/SensitivityAcetyl- 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 / PurificationMonoclonal antibody is produced by immunizing animals with a synthetic acetylpeptide corresponding to residues surrounding Lys40 of human α -tubulin protein.**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.**Background**

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). 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).

Background References

1. Westermann, S. and Weber, K. (2003) *Nat Rev Mol Cell Biol* 4, 938-47.
2. Creppe, C. et al. (2009) *Cell* 136, 551-64.
3. Hubbert, C. et al. (2002) *Nature* 417, 455-8.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot BufferIMPORTANT: 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 **Z:** Zebrafish**Trademarks and Patents**

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