

# PRODUCT INFORMATION



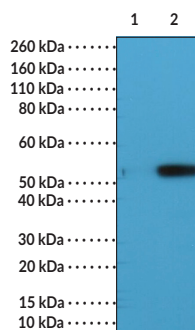
## $\alpha$ -Tubulin K40Ac Rabbit Monoclonal Antibody (Clone RM318)

Item No. 32260

### Overview and Properties

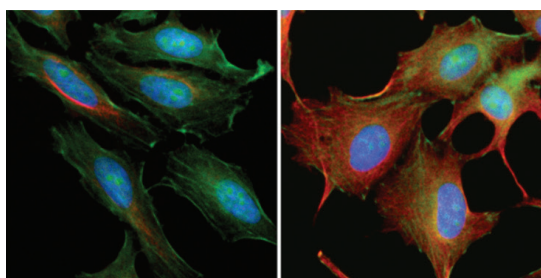
<b>Contents:</b>	This vial contains 100 $\mu$ l of protein A-affinity purified monoclonal antibody.
<b>Immunogen:</b>	Peptide corresponding to $\alpha$ -tubulin K40Ac
<b>Cross Reactivity:</b>	(+) $\alpha$ -Tubulin (K40Ac); (-) $\alpha$ -Tubulin without acetylation at K40
<b>Species Reactivity:</b>	(+) Human
<b>Form:</b>	Liquid
<b>Storage:</b>	-20°C (as supplied)
<b>Stability:</b>	$\geq$ 1 year
<b>Storage Buffer:</b>	PBS with 50% glycerol, 1% BSA, and 0.09% sodium azide
<b>Clone:</b>	RM318
<b>Host:</b>	Rabbit
<b>Isotype:</b>	IgG
<b>Applications:</b>	Immunocytochemistry (ICC) and Western blot (WB); the recommended starting dilution is 1:1,000-1:5,000 for ICC and 1:1,000-1:2,000 for WB. Other applications were not tested, therefore optimal working concentration/dilution should be determined empirically.

### Images



Lane 1: HeLa cell lysates untreated  
Lane 2: HeLa cell lysates treated

WB of HeLa cell lysates untreated or treated with trichostatin A using  $\alpha$ -Tubulin K40Ac Rabbit Monoclonal Antibody (Clone RM318) at a dilution of 1:1,000.



Untreated

Treated

Immunofluorescent labeling of HeLa cells untreated or treated with trichostatin A using  $\alpha$ -Tubulin K40Ac Rabbit Monoclonal Antibody (Clone RM318) (red). Actin filaments have been labeled with fluorescein phalloidin (green) and nuclei labeled with DAPI (blue).

**WARNING**  
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

**SAFETY DATA**  
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

**WARRANTY AND LIMITATION OF REMEDY**  
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## Description

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$\alpha$ -Tubulin is a cytoskeletal protein and constituent of microtubules, a cytoskeletal assembly that has roles in a variety of cellular processes, including cell motility, division, differentiation, and intracellular transport.<sup>1</sup>  $\alpha$ -Tubulin is highly conserved in eukaryotes and expressed in a cell- and isotype-specific manner.<sup>2</sup> There are eight human  $\alpha$ -tubulin isotypes that consist of an N-terminal domain, which binds GTP and is required for microtubule self-assembly, and a variable C-terminal tail, which contains interaction sites for microtubule-associated proteins (MAPs) and is subject to a variety of post-translational modifications that regulate microtubule function and stability.<sup>1,3-5</sup>  $\alpha$ -Tubulin can be acetylated at a variety of sites, including on the luminal side of microtubules at lysine 40 (K40Ac), by  $\alpha$ -tubulin N-acetyltransferase 1 ( $\alpha$ -TAT) and deacetylated primarily by histone deacetylase 6 (HDAC6).<sup>6,7</sup>  $\alpha$ -Tubulin K40Ac is a marker of stable microtubules that recruits dynein and kinesin-1 to microtubules. It is also involved in regulating microtubule architecture as well as immune and viral responses.<sup>6-8</sup> The levels of  $\alpha$ -tubulin acetylation are decreased in a variety of neurological disorders, increased in various cancers, and dysregulated in immune disorders.<sup>7</sup> Cayman's  $\alpha$ -Tubulin K40Ac Rabbit Monoclonal Antibody (Clone RM318) can be used for immunocytochemistry (ICC) and Western blot (WB) applications.

## References

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