

## ARG65693 anti-alpha Tubulin antibody

Package: 100 µl, 50 µl  
Store at: -20°C

### Summary

Product Description	Rabbit Polyclonal antibody recognizes alpha Tubulin
Tested Reactivity	Hu, Ms, Rat
Tested Application	FACS, ICC/IF, IHC-P, WB
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Target Name	alpha Tubulin
Species	Human
Immunogen	Synthetic peptide of Human alpha Tubulin protein.
Conjugation	Un-conjugated
Alternate Names	Tubulin K-alpha-1; Alpha-tubulin ubiquitous; Tubulin alpha-ubiquitous chain; Tubulin alpha-1B chain; K-ALPHA-1

### Application Instructions

Application table	Application	Dilution
	FACS	1:50 - 1:100
	ICC/IF	1:200 - 1:500
	IHC-P	1:200 - 1:500
	WB	1:5000 - 1:20000
Application Note	* The dilutions indicate recommended starting dilutions and the optimal dilutions or concentrations should be determined by the scientist.	
Positive Control	NIH/3T3, HeLa, HepG2, PC12, human stomach tissue, human tonsil tissue, mouse pancreas tissue	

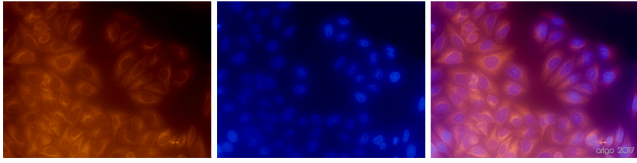
### Properties

Form	Liquid
Purification	Affinity purification with immunogen.
Buffer	1*TBS (pH 7.4), 0.05% Sodium azide, 1% BSA and 40% Glycerol
Preservative	0.05% Sodium azide
Stabilizer	1% BSA, 40% Glycerol
Storage instruction	For continuous use, store undiluted antibody at 2-8°C for up to a week. For long-term storage, aliquot and store at -20°C. Storage in frost free freezers is not recommended. Avoid repeated freeze/thaw cycles. Suggest spin the vial prior to opening. The antibody solution should be gently mixed before use.

Note For laboratory research only, not for drug, diagnostic or other use.

## Bioinformation

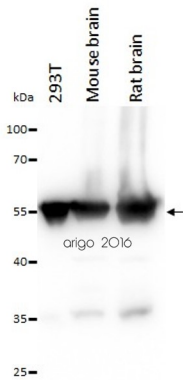
Gene Symbol	TUBA1B
Gene Full Name	tubulin, alpha 1b
Function	Tubulin is the major constituent of microtubules. It binds two moles of GTP, one at an exchangeable site on the beta chain and one at a non-exchangeable site on the alpha chain. [UniProt]
Highlight	Related Antibody Duos and Panels: <a href="#">ARG30258 Loading Controls for Whole Cell Lysate Antibody Panel</a> Related products: <a href="#">alpha Tubulin antibodies</a> ; <a href="#">alpha Tubulin Duos / Panels</a> ; <a href="#">Anti-Rabbit IgG secondary antibodies</a> ;
Research Area	Signaling Transduction antibody; Loading Control antibody
Calculated Mw	50 kDa
PTM	<p>Some glutamate residues at the C-terminus are polyglutamylated, resulting in polyglutamate chains on the gamma-carboxyl group (PubMed:26875866). Polyglutamylation plays a key role in microtubule severing by spastin (SPAST). SPAST preferentially recognizes and acts on microtubules decorated with short polyglutamate tails: severing activity by SPAST increases as the number of glutamates per tubulin rises from one to eight, but decreases beyond this glutamylation threshold (PubMed:26875866).</p> <p>Some glutamate residues at the C-terminus are monoglycylated but not polyglycylated due to the absence of functional TTLL10 in human. Monoglycylation is mainly limited to tubulin incorporated into axonemes (cilia and flagella). Both polyglutamylation and monoglycylation can coexist on the same protein on adjacent residues, and lowering glycylation levels increases polyglutamylation, and reciprocally. The precise function of monoglycylation is still unclear (Probable).</p> <p>Acetylation of alpha chains at Lys-40 is located inside the microtubule lumen. This modification has been correlated with increased microtubule stability, intracellular transport and ciliary assembly.</p> <p>Methylation of alpha chains at Lys-40 is found in mitotic microtubules and is required for normal mitosis and cytokinesis contributing to genomic stability.</p> <p>Nitration of Tyr-451 is irreversible and interferes with normal dynein intracellular distribution.</p> <p>Undergoes a tyrosination/detyrosination cycle, the cyclic removal and re-addition of a C-terminal tyrosine residue by the enzymes tubulin tyrosine carboxypeptidase (TTCP) and tubulin tyrosine ligase (TTL), respectively.</p> <p>Tubulin alpha-1B chain: Tyrosination promotes microtubule interaction with CAP-Gly domain-containing proteins such as CLIP1, CLIP2 and DCTN1 (By similarity). Tyrosination regulates the initiation of dynein-dynactin motility via interaction with DCTN1, which brings the dynein-dynactin complex into contact with microtubules (PubMed:26972003). In neurons, tyrosinated tubulins mediate the initiation of retrograde vesicle transport (By similarity).</p> <p>Detyrosinated tubulin alpha-1B chain: Detyrosination is involved in metaphase plate congression by guiding chromosomes during mitosis: detyrosination promotes interaction with CENPE, promoting pole-proximal transport of chromosomes toward the equator (PubMed:25908662). Detyrosination increases microtubules-dependent mechanotransduction in dystrophic cardiac and skeletal muscle. In cardiomyocytes, detyrosinated microtubules are required to resist to contractile compression during contraction: detyrosination promotes association with desmin (DES) at force-generating sarcomeres, leading to buckled microtubules and mechanical resistance to contraction (By similarity).</p>



ARG65693 anti-alpha Tubulin antibody ICC/IF image

Immunofluorescence: 100% Methanol fixed (RT, 10 min) HeLa cells stained with ARG65693 anti-alpha Tubulin antibody at 1:200 dilution. Left: primary antibody (orange). Middle: DAPI (blue). Right: Merge.

Secondary antibody: ARG21917 Goat anti-Rabbit IgG antibody (TRITC)



ARG65693 anti-alpha Tubulin antibody WB image

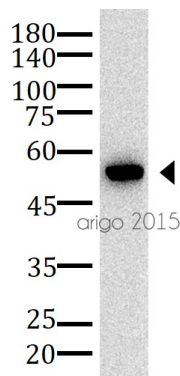
Western blot: 20 µg of 293T, Mouse brain and Rat brain lysates stained with ARG65693 anti-alpha Tubulin antibody at 1:10000 dilution.



ARG65693 anti-alpha Tubulin antibody WB image

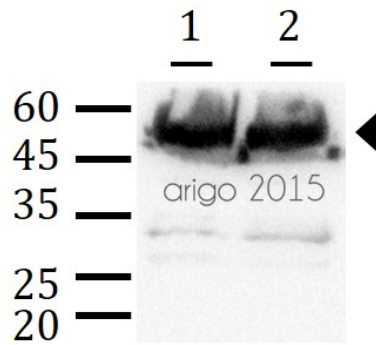
Western blot: Mouse retina stained with ARG65693 anti-alpha Tubulin antibody and [ARG65351 Goat anti-Rabbit IgG antibody \(HRP\)](#).

From Xiaoyuan Ye et al. Mol Ther Nucleic Acids. (2024), [doi: 10.1016/j.omtn.2024.102209](#), Fig. 5.D.



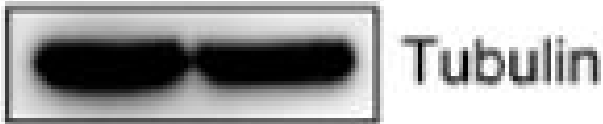
ARG65693 anti-alpha Tubulin antibody WB image

Western blot: 30 µg of HeLa cell lysate stained with ARG65693 anti-alpha Tubulin antibody at 1:5000 dilution.



ARG65693 anti-alpha Tubulin antibody WB image

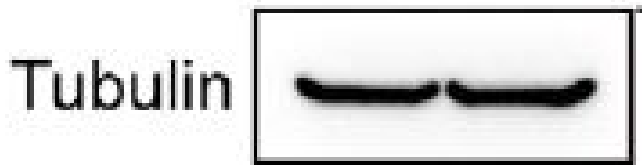
Western blot: 30 µg of 1) Mouse brain, and 2) Rat brain lysates stained with ARG65693 anti-alpha Tubulin antibody at 1:500 dilution.



ARG65693 anti-alpha Tubulin antibody WB image

Western blot: A549 cells stained with ARG65693 anti-alpha Tubulin antibody at 1:10000 dilution.

From Youwei Huang et al. Oncol Rep (2022), [doi: 10.3892/or.2022.8396](https://doi.org/10.3892/or.2022.8396), Fig. 4. A.



ARG65693 anti-alpha Tubulin antibody WB image

Western blot: HCT116 cells stained with ARG65693 anti-alpha Tubulin antibody.

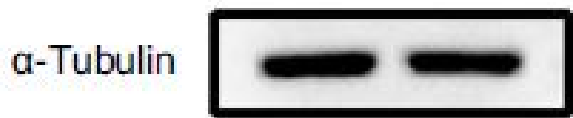
From Fang Wang et al. Cell Rep (2023), [doi: 10.1016/j.celrep.2023.113318](https://doi.org/10.1016/j.celrep.2023.113318), Fig. 3. A.



ARG65693 anti-alpha Tubulin antibody WB image

Western blot: Rat sample stained with ARG65693 anti-alpha Tubulin antibody at 1:5000 dilution.

From Jinzhi Li et al. J Reprod Immunol (2023), [doi: 10.1016/j.jri.2023.104166](https://doi.org/10.1016/j.jri.2023.104166), Fig. 2. B.



ARG65693 anti-alpha Tubulin antibody WB image

Western blot: Glioma cells stained with ARG65693 anti-alpha Tubulin antibody at 1:5000 dilution.

From Xueqin Chen et al. Nat Commun (2023), [doi: 10.1038/s41467-023-42545-3](https://doi.org/10.1038/s41467-023-42545-3), Fig. 2. D.

$\alpha$ -tubulin



ARG65693 anti-alpha Tubulin antibody WB image

Western blot: HCT116 and SF763 cells stained with ARG65693 anti-alpha Tubulin antibody at 1:10000 dilution.

From Yuqing Yang et al. *Oncol Rep* (2024), [doi: 10.3892/or.2024.8813](https://doi.org/10.3892/or.2024.8813), Fig. 6. B.

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Tubulin



ARG65693 anti-alpha Tubulin antibody WB image

Western blot: GBM cells stained with ARG65693 anti-alpha Tubulin antibody.

From Jialuo Mai et al. *Mol Oncol* (2019), [doi: 10.1002/1878-0261.12525](https://doi.org/10.1002/1878-0261.12525), Fig. 2. D.

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