

ARG66788 anti-alpha Tubulin antibody

Package: 100 µg
Store at: -20°C

Summary

Product Description	Mouse Monoclonal antibody recognizes alpha Tubulin
Tested Reactivity	Hu, Ms, Rat
Tested Application	ICC/IF, IHC-P, IP, WB
Host	Mouse
Clonality	Monoclonal
Isotype	IgG
Target Name	alpha Tubulin
Species	Human
Immunogen	Recombinant Protein of alpha Tubulin.
Conjugation	Un-conjugated
Alternate Names	CDCBM1; Tubulin beta-4 chain; Tubulin beta-3 chain; CFEOM3A; Tubulin beta-III; TUBB4; CDCBM; CFEOM3; FEOM3; beta-4

Application Instructions

Application table	Application	Dilution
	ICC/IF	1:200
	IHC-P	1:50 - 1:300
	IP	1:200
	WB	1:500 - 1:10000
Application Note	IHC-P: Antigen Retrieval: Boil tissue section in Sodium citrate buffer (pH 6.0) for 20 min. * The dilutions indicate recommended starting dilutions and the optimal dilutions or concentrations should be determined by the scientist.	
Positive Control	HeLa, Rat brain and Mouse brain	
Observed Size	~ 55 kDa	

Properties

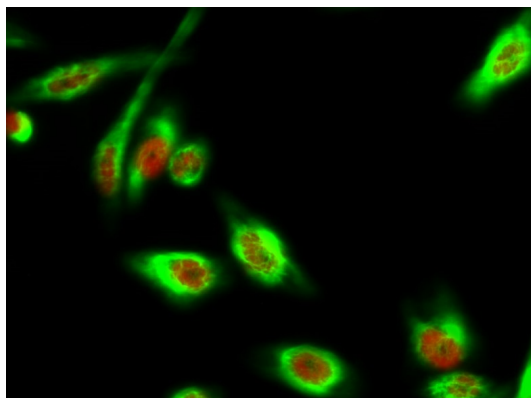
Form	Liquid
Purification	Affinity purification with immunogen.
Buffer	PBS (pH 7.4), 0.02% Sodium azide, 50% Glycerol and 0.5% BSA.
Preservative	0.02% Sodium azide
Stabilizer	50% Glycerol and 0.5% BSA

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

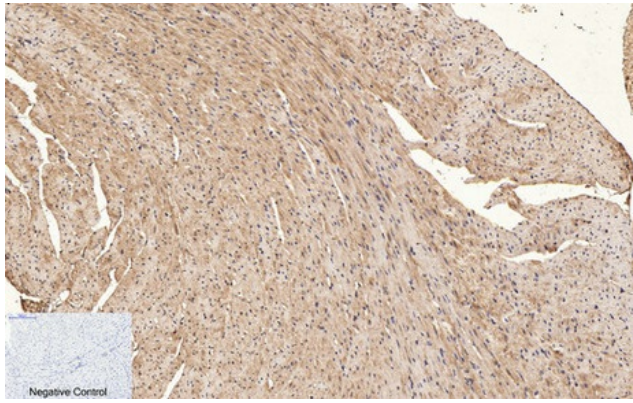
Gene Symbol	TUBB3
Gene Full Name	tubulin, beta 3 class III
Background	This gene encodes a class III member of the beta tubulin protein family. Beta tubulins are one of two core protein families (alpha and beta tubulins) that heterodimerize and assemble to form microtubules. This protein is primarily expressed in neurons and may be involved in neurogenesis and axon guidance and maintenance. Mutations in this gene are the cause of congenital fibrosis of the extraocular muscles type 3. Alternate splicing results in multiple transcript variants. A pseudogene of this gene is found on chromosome 6. [provided by RefSeq, Oct 2010]
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. TUBB3 plays a critical role in proper axon guidance and maintenance. Binding of NTN1/Netrin-1 to its receptor UNC5C might cause dissociation of UNC5C from polymerized TUBB3 in microtubules and thereby lead to increased microtubule dynamics and axon repulsion (PubMed:28483977). Plays a role in dorsal root ganglion axon projection towards the spinal cord (PubMed:28483977). [UniProt]
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>Phosphorylated on Ser-172 by CDK1 during the cell cycle, from metaphase to telophase, but not in interphase. This phosphorylation inhibits tubulin incorporation into microtubules. [UniProt]</p>
Cellular Localization	Cytoplasm, cytoskeleton. [UniProt]

Images



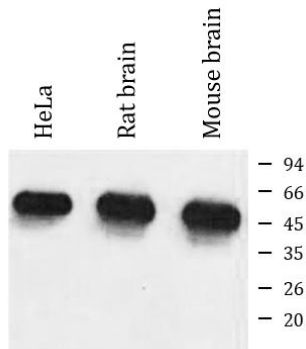
ARG66788 anti-alpha Tubulin antibody ICC/IF image

Immunofluorescence: HeLa cells stained with anti-DAPK3 phospho (Thr265) antibody (red) at 1:200 dilution, overnight at 4°C. Cells were co-stained with ARG66788 anti-alpha Tubulin antibody (green) at 1:200 dilution, overnight at 4°C.



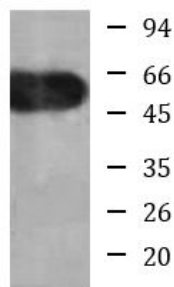
ARG66788 anti-alpha Tubulin antibody IHC-P image

Immunohistochemistry: Paraffin-embedded Mouse heart tissue. Antigen Retrieval: Boil tissue section in Sodium citrate buffer (pH 6.0) for 20 min. The tissue section was stained with ARG66788 anti-alpha Tubulin antibody at 1:200 dilution, overnight at 4°C. Negative control was used by secondary antibody only.



ARG66788 anti-alpha Tubulin antibody WB image

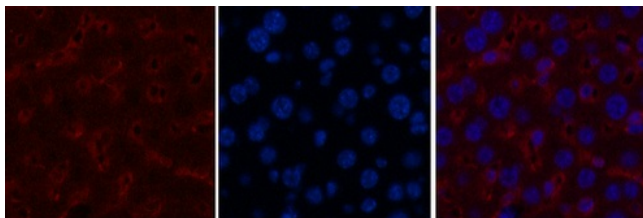
Western blot: HeLa, Rat brain and Mouse brain lysate stained with ARG66788 anti-alpha Tubulin antibody at 1:5000 dilution.



Mouse brain

ARG66788 anti-alpha Tubulin antibody IP image

Immunoprecipitation: Mouse brain lysate were immunoprecipitated and stained with ARG66788 anti-alpha Tubulin antibody.



ARG66788 anti-alpha Tubulin antibody IHC-P image

Immunohistochemistry: Paraffin-embedded Mouse liver tissue stained with ARG66788 anti-alpha Tubulin antibody (red) at 1:200 dilution, overnight at 4°C. DAPI (blue) for nuclear staining.