ARG42915
anti-beta III Tubulin antibody

Package: 100 µl
Store at: -20°C

Summary

Product Description	Rabbit Polyclonal antibody recognizes beta III Tubulin
Tested Reactivity	Hu, Ms
Tested Application	ICC/IF, IHC-P, WB
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Target Name	beta III Tubulin
Species	Human
Immunogen	Human beta III 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 - 1:500
IHC-P	1:100 - 1:200
WB	1:5000 - 1:10000

Application Note	* The dilutions indicate recommended starting dilutions and the optimal dilutions or concentrations should be determined by the scientist.
Positive Control	SK-N-SH and Mouse brain
Observed Size	~ 50 kDa

Properties

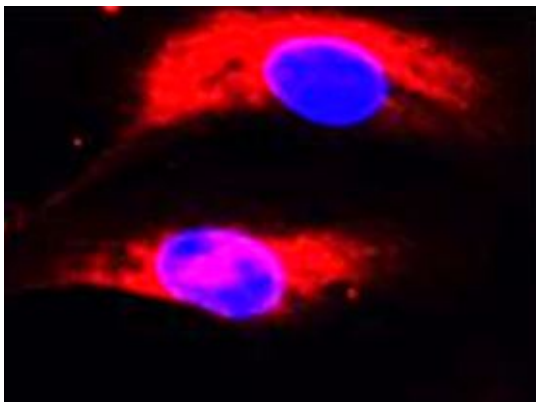
Form	Liquid
Purification	Affinity purified.
Buffer	100 mM Tris Glycine (pH 7.0), 0.025% ProClin 300, 20% Glycerol and 1% BSA.
Preservative	0.025% ProClin 300
Stabilizer	20% Glycerol and 1% BSA
Concentration	0.57 mg/ml
Storage instruction	For continuous use, store undiluted antibody at 2-8°C for up to 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

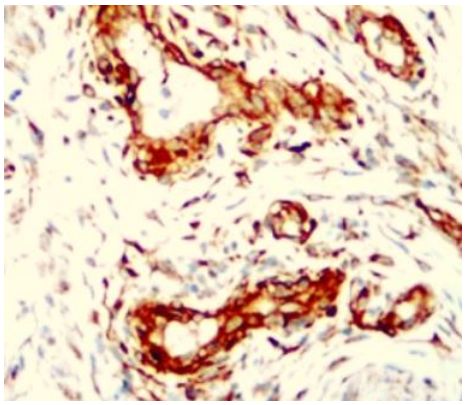
Gene Symbol	TUBB3
Gene Full Name	tubulin, beta 3 class III
Background	This gene encodes a class III member of the beta tubulin protein family. Beta tubulins are one of two core protein families (alpha and beta tubulins) that heterodimerize and assemble to form microtubules. This protein is primarily 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 mantainance. 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	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). 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). 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]
Cellular Localization	Cytoplasm, cytoskeleton. [UniProt]

Images



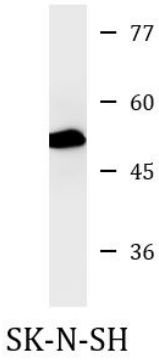
ARG42915 anti-beta III Tubulin antibody ICC/IF image

Immunofluorescence: HUVEC cells were fixed with 4% paraformaldehyde for 10 min at RT, permeabilized with 0.1% NP-40 for 10 min at RT then blocked with 5% BSA for 30 min at room temperature. Cells were stained with ARG42915 anti-beta III Tubulin antibody (red) at 1:200 dilution and 4°C. DAPI (blue) for nuclear staining.



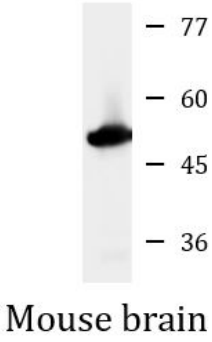
ARG42915 anti-beta III Tubulin antibody IHC-P image

Immunohistochemistry: Paraffin-embedded Human gastric carcinoma tissue stained with ARG42915 anti-beta III Tubulin antibody at 1:100 dilution.



ARG42915 anti-beta III Tubulin antibody WB image

Western blot: 20 µg of SK-N-SH cell lysate stained with ARG42915 anti-beta III Tubulin antibody at 1:5000 dilution.



ARG42915 anti-beta III Tubulin antibody WB image

Western blot: 20 µg of Mouse brain lysate stained with ARG42915 anti-beta III Tubulin antibody at 1:5000 dilution.