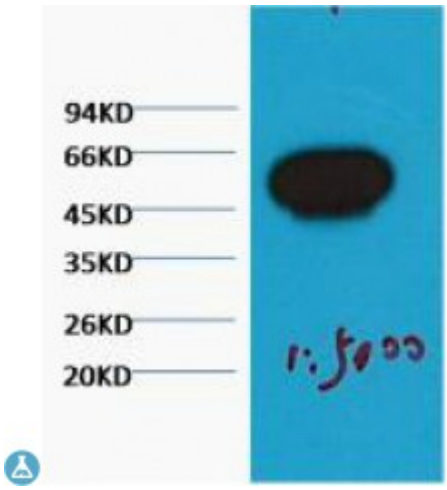
Anti-beta-Tubulin antibody



Description	Mouse monoclonal to beta-Tubulin.

Model	STJ97016
Host	Mouse
Reactivity	Zebrafish
Applications	WB
Immunogen	Synthetic Peptide
Immunogen Region	C-term
Gene ID	10381
Gene Symbol	TUBB3
Dilution range	WB 1:2000-5000
Specificity	The antibody detects Zebrafish endogenousbeta-tubulin protein.
Tissue Specificity	Expression is primarily restricted to central and peripheral nervous system. Greatly increased expression in most cancerous tissues.
Purification	The antibody was affinity-purified from mouse ascites by affinity-chromatography using specific immunogen.
Note	For Research Use Only (RUO).
Protein Name	Tubulin beta-3 chain Tubulin beta-4 chain Tubulin beta-III
Clonality	Monoclonal
Conjugation	Unconjugated

Isotype	IgG1
Formulation	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.
Concentration	1 mg/ml
Storage Instruction	Store at -20°C, and avoid repeat freeze-thaw cycles.
Database Links	HGNC:20772OMIM:600638
Alternative Names	Tubulin beta-3 chain Tubulin beta-4 chain Tubulin beta-III
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.
Sequence and Domain Family	The highly acidic C-terminal region may bind cations such as calcium.
Cellular Localization	Cytoplasm, cytoskeleton.
Post-translational Modifications	Some glutamate residues at the C-terminus are polyglutamylated, resulting in polyglutamate chains on the gamma-carboxyl group . 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 . 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.