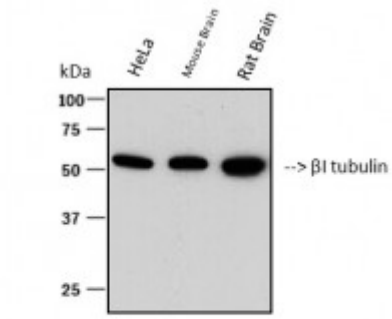
Anti-beta I tubulin antibody



Western Blot (WB) analysis of 1)HeLa, 2)mouse brain tissue, 3)rat brain tissue using βI tubulin Antibody(STJ96939), diluted at 1:5000.

Description	beta I tubulin is a protein encoded by the TUBB1 gene which is approximately 50,3 kDa. beta I tubulin is localised to the cytoplasm. It is involved in development Slit-Robo signalling, Sertoli-Sertoli cell junction dynamics, signalling in gap junctions and chaperonin-mediated protein folding. This protein falls under the beta tubulin protein family. It is one of two core protein families that heterodimerize and assemble to form microtubules. It is exists in platelets and megakaryocytes and may be involved in proplatelet production and platelet release. beta I tubulin is expressed in the blood and cells of the nervous system. Mutations in the TUBB1 gene may result in macrothrombocytopaenia. STJ96939 was developed from clone 3F7 and was affinity-purified from mouse ascites by affinity-chromatography using specific immunogen. This antibody detects endogenous beta I tubulin proteins.

Model	STJ96939
Host	Mouse
Reactivity	Human, Mouse, Rat
Applications	WB
Immunogen	Synthetic Peptide
Gene ID	81027
Gene Symbol	TUBB1
Dilution range	WB 1:5000-10000
Specificity	The antibody detects endgenousbeta I tubulin proteins.
Tissue Specificity	Hematopoietic cell-specific. Major isotype in leukocytes, where it represents

	50% of all beta-tubulins.
Purification	The antibody was affinity-purified from mouse ascites by affinity-chromatography using specific immunogen.
Clone ID	3F7
Note	For Research Use Only (RUO).
Protein Name	Tubulin beta-1 chain
Clonality	Monoclonal
Conjugation	Unconjugated
Isotype	IgG1
Formulation	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.
Storage Instruction	Store at -20°C, and avoid repeat freeze-thaw cycles.
Database Links	HGNC:16257OMIM:612901
Alternative Names	Tubulin beta-1 chain
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 .
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.