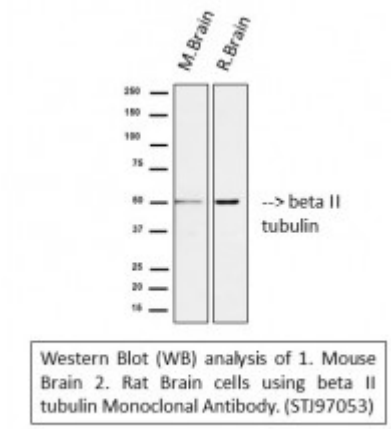
Anti-beta II tubulin antibody



Western Blot (WB) analysis of 1. Mouse Brain 2. Rat Brain cells using beta II tubulin Monoclonal Antibody. (STJ97053)

Description	beta II tubulin is a protein encoded by the TUBB2A gene which is approximately 49,9 kDa. beta II tubulin is localised to the cytoplasm and cytoskeleton. It is involved in Sertoli-Sertoli cell junction dynamics, development Slit-Robo signalling and the GPCR pathway. Tubulin is the major constituent of microtubules. Microtubules are key participants in processes such as mitosis and intracellular transport and are composed of heterodimers of alpha- and beta-tubulins. 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. beta II tubulin is expressed in the nervous system, eye, skin and lung. Mutations in the TUBB2A gene may result in lung mucoepidermoid carcinoma. STJ97053 was developed from clone Mix and was affinity-purified from mouse ascites by affinity-chromatography using specific immunogen. The antibody detects endogenous beta II tubulin protein.

Model	STJ97053
Host	Mouse
Reactivity	Human, Mouse, Rat
Applications	IP, WB
Immunogen	Synthetic Peptide
Gene ID	7280
Gene Symbol	TUBB2A
Dilution range	WB 1:50000-100000IP 1:200
Specificity	The antibody detects endogenous beta II tubulin protein.

Tissue Specificity	High expression in brain, where it represents 30% of all beta-tubulins.
Purification	The antibody was affinity-purified from mouse ascites by affinity-chromatography using specific immunogen.
Clone ID	Mix
Note	For Research Use Only (RUO).
Protein Name	Tubulin beta-2A chain Tubulin beta class IIa
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:12412OMIM:615101
Alternative Names	Tubulin beta-2A chain Tubulin beta class IIa
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.