

## **Anti-TBB4A** antibody



**Description** Unconjugated Rabbit polyclonal to TBB4A

Model STJ192957

**Host** Rabbit

**Reactivity** Human, Mouse

**Applications** ELISA, WB

**Gene ID** <u>10382</u>

Gene Symbol TUBB4A

**Dilution range** WB 1:500-2000 ELISA 1:5000-20000

**Specificity** TBB4A Polyclonal Antibody detects endogenous levels of protein.

**Tissue Specificity** Major isotype in brain, where it represents 46% of all beta-tubulins. In the

brain, highest expression levels in the cerebellum, followed by putamen and white matter. Moderate levels in testis. Very low levels, if any, in other

tissues.

**Purification** TBB4A antibody was affinity-purified from rabbit antiserum by affinity-

chromatography using epitope-specific immunogen.

**Note** For Research Use Only (RUO).

Protein Name Tubulin beta-4A chain Tubulin 5 beta Tubulin beta-4 chain

Molecular Weight 48 kDa

**Clonality** Polyclonal

**Conjugation** Unconjugated

IgG **Isotype** 

**Formulation** Liquid form in PBS containing 50% glycerol, and 0.02% sodium azide.

Concentration 1 mg/ml

Store at -20°C, and avoid repeat freeze-thaw cycles. **Storage Instruction** 

**Database Links** HGNC:20774OMIM:128101

**Alternative Names** Tubulin beta-4A chain Tubulin 5 beta Tubulin beta-4 chain

Tubulin is the major constituent of microtubules. It binds two moles of GTP, **Function** 

one at an exchangeable site on the beta chain and one at a non-exchangeable

site on the alpha chain.

The highly acidic C-terminal region may bind cations such as calcium. **Sequence and Domain Family** 

**Cellular Localization** Cytoplasm, cytoskeleton.

Post-translational Some glutamate residues at the C-terminus are polyglutamylated, resulting in **Modifications** 

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.

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