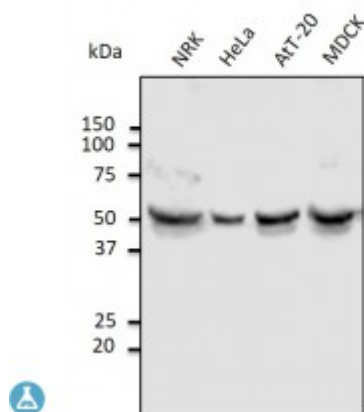


Anti-TUBA4A antibody



Description

Goat polyclonal antibody to alpha tubulin. Microtubules of the eukaryotic cytoskeleton perform essential and diverse functions and are composed of a heterodimer of alpha and beta tubulin. The alpha and beta tubulins represent the major components of microtubules, while gamma tubulin plays a critical role in the nucleation of microtubule assembly.

Model

STJ140087

Host

Goat

Reactivity

Avian, Bovine, Canine, Donkey, Feline, Goat, Guinea Pig, Hamster, Horse, Human, Mouse, Other, Porcine, Rabbit, Rat, Sheep, Simian

Applications

WB

Immunogen

Purified recombinant peptide derived from within residues 80 aa to the N-terminus of human alpha tubulin produced in E. coli.

Immunogen Region

N-Term

Gene ID

[7277](#)

Gene Symbol

[TUBA4A](#)

Dilution range

Western blot 1:250-1:2,000 Immunofluorescence ND Immunohistochemistry (paraffin) ND Immunohistochemistry (frozen) ND

Specificity

This antibody gives a positive signal in the following human (HeLa), rat (NRK), mouse (AtT-20), dog (MDCK) whole cell lysates.

Purification

This antibody is epitope-affinity purified from goat antiserum.

Note

For research use only (RUO).

Protein Name

Tubulin alpha-4A chain (Alpha-tubulin 1) (Testis-specific alpha-tubulin)

	(Tubulin H2-alpha) (Tubulin alpha-1 chain)
Molecular Weight	50 kDa
Clonality	Polyclonal
Conjugation	Unconjugated
Isotype	IgG
Formulation	PBS, 20% glycerol and 0.05% sodium azide.
Concentration	3 mg/mL
Storage Instruction	Store at -20°, and avoid repeated freeze-thaw cycles.
Database Links	HGNC:12407OMIM:191110
Alternative Names	Tubulin alpha-4A chain (Alpha-tubulin 1) (Testis-specific alpha-tubulin) (Tubulin H2-alpha) (Tubulin alpha-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 TTL10 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). Acetylation of alpha chains at Lys-40 is located inside the microtubule lumen. This modification has been correlated with increased microtubule stability, intracellular transport and ciliary assembly. Methylation of alpha chains at Lys-40 is found in mitotic microtubules and is required for normal mitosis and cytokinesis contributing to genomic stability.