



Rabbit Anti-Tubulin, Alpha 4a antibody

SL20495R

Product Name:	Tubulin, Alpha 4a
Chinese Name:	微管蛋白 α /Tubulin α 抗体
Alias:	Alpha tubulin 1; Alpha-tubulin 1; Detyrosinated alpha Tubulin; FLJ30169; H2 alpha; TBA4A_HUMAN; Testis specific alpha tubulin; Testis-specific alpha-tubulin; TUBA 4A; TUBA1; Tuba4a; Tubulin alpha 1 (testis specific); Tubulin alpha 1; Tubulin alpha 1 chain; Tubulin alpha 4a; Tubulin alpha 4A chain; Tubulin alpha-1 chain; Tubulin alpha-4A chain; Tubulin H2 alpha; Tubulin H2-alpha; TUBA4A.
Organism Species:	Rabbit
Clonality:	Polyclonal
React Species:	Human,Mouse,Rat,Dog,Pig,Cow,Horse,Rabbit,Sheep,
Applications:	WB=1:500-2000ELISA=1:500-1000IHC-P=1:400-800IHC-F=1:400-800Flow-Cyt=1 μ g/TestICC=1:100-500IF=1:100-500 (Paraffin sections need antigen repair) not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Molecular weight:	50kDa
Cellular localization:	cytoplasmic
Form:	Lyophilized or Liquid
Concentration:	1mg/ml
immunogen:	KLH conjugated synthetic peptide derived from human Tubulin, Alpha 4a:41-140/448
Lsotype:	IgG
Purification:	affinity purified by Protein A
Storage Buffer:	Preservative: 15mM Sodium Azide, Constituents: 1% BSA, 0.01M PBS, pH 7.4
Storage:	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. The lyophilized antibody is stable at room temperature for at least one month and for greater than a year when kept at -20°C. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.
PubMed:	PubMed
Product Detail:	Microtubules of the eukaryotic cytoskeleton perform essential and diverse functions and are composed of a heterodimer of alpha and beta tubulin. The genes encoding these microtubule constituents are part of the tubulin superfamily, which is composed of six

distinct families. Genes from the alpha, beta and gamma tubulin families are found in all eukaryotes. The alpha and beta tubulins represent the major components of microtubules, while gamma tubulin plays a critical role in the nucleation of microtubule assembly. There are multiple alpha and beta tubulin genes and they are highly conserved among and between species. This gene encodes an alpha tubulin that is a highly conserved homolog of a rat testis-specific alpha tubulin. Alternatively spliced transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Jun 2013]

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

Subunit:

Dimer of alpha and beta chains. A typical microtubule is a hollow water-filled tube with an outer diameter of 25 nm and an inner diameter of 15 nm. Alpha-beta heterodimers associate head-to-tail to form protofilaments running lengthwise along the microtubule wall with the beta-tubulin subunit facing the microtubule plus end conferring a structural polarity. Microtubules usually have 13 protofilaments but different protofilament numbers can be found in some organisms and specialized cells.

Subcellular Location:

Cytoplasm, cytoskeleton

Tissue Specificity:

Widely expressed. Overexpressed in Platelet, Brain, and Frontal cortex

Post-translational modifications:

Some glutamate residues at the C-terminus are polyglutamylated. This modification occurs exclusively on glutamate residues and results in polyglutamate chains on the gamma-carboxyl group. Also 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) whereas glutamylation is prevalent in neuronal cells, centrioles, axonemes, and the mitotic spindle. Both modifications can coexist on the same protein on adjacent residues, and lowering glycylation levels increases polyglutamylated, and reciprocally. The precise function of such modifications is still unclear but they regulate the assembly and dynamics of axonemal microtubules (Probable).

Acetylation of alpha chains at Lys-40 stabilizes microtubules and affects affinity and processivity of microtubule motors. This modification has a role in multiple cellular functions, ranging from cell motility, cell cycle progression or cell differentiation to intracellular trafficking and signaling (By similarity).

Similarity:

Belongs to the tubulin family.

SWISS:
P68366

Gene ID:
7277

Database links:

[Entrez Gene: 7277](#)Human

[Entrez Gene: 22145](#)Mouse

[Entrez Gene: 316531](#)Rat

[Omim: 191110](#)Human

[SwissProt: P68366](#)Human

[SwissProt: P68368](#)Mouse

[SwissProt: Q5XIF6](#)Rat

[Unigene: 75318](#)Human

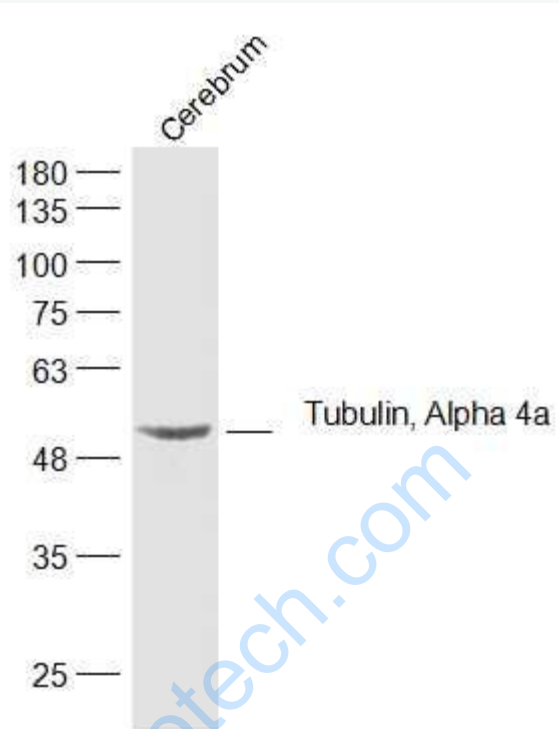
[Unigene: 1155](#)Mouse

[Unigene: 92961](#)Rat

Important Note:

This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.

Picture:



Sample:

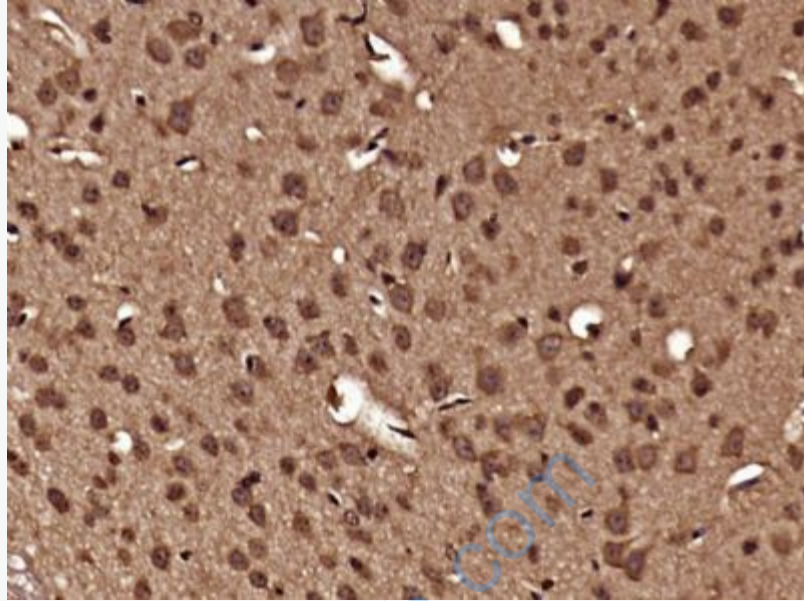
Cerebrum (Mouse) Lysate at 40 ug

Primary: Anti-Tubulin, Alpha 4a (SL20495R) at 1/300 dilution

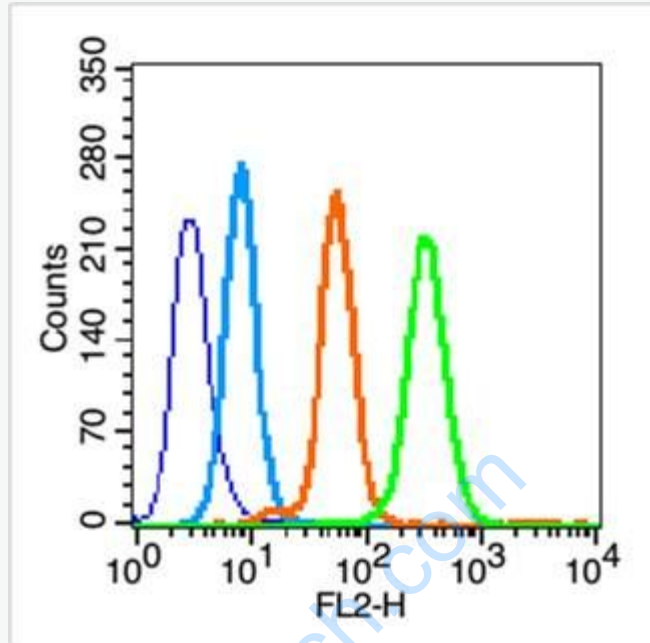
Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution

Predicted band size: 50 kD

Observed band size: 50 kD



Paraformaldehyde-fixed, paraffin embedded (Mouse brain); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (Tubulin, Alpha 4a) Polyclonal Antibody, Unconjugated (SL20495R) at 1:400 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructions and DAB staining.



Blank control (blue line): Hep G2 (fixed with 70% ethanol (Overnight at 4°C) and then permeabilized with 0.1% PBS-Tween for 20 min at room temperature).

Primary Antibody (green line): Rabbit Anti-Tubulin, Alpha 4a antibody (SL20495R), Dilution: 0.2µg /10⁶ cells;

Isotype Control Antibody (orange line): Rabbit IgG .

Secondary Antibody (white blue line): Goat anti-rabbit IgG-PE, Dilution: 1µg /test.