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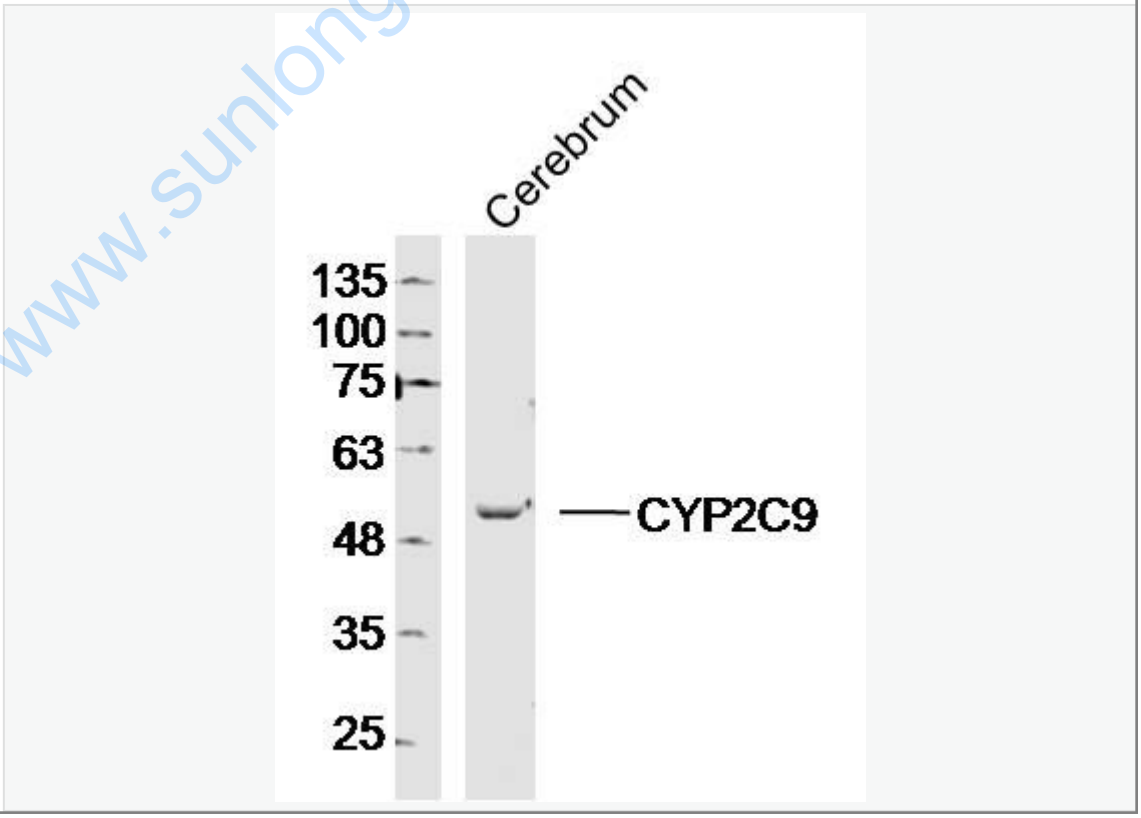
Rabbit Anti-Tubulin alpha antibody

SL20496R

Product Name:	Tubulin alpha
Chinese Name:	微管蛋白α 1A/1B抗体
Alias:	TUBA1A + TUBA1B; Tubulin, Alpha 1b; Tubulin Alpha-Ubiquitous Chain; Alpha-Tubulin Ubiquitous; Tubulin K-Alpha-1; Tubulin, Alpha, Ubiquitous; Tubulin Alpha-1B Chain; Alpha Tubulin; Ubiquitous; K-ALPHA-1; Tubulin Alpha; TBA1B_HUMAN; Tubulin, Alpha 1a; TUBA3; Tubulin Alpha-3 Chain; Tubulin B-Alpha-1; LIS3; Tubulin, Alpha, Brain-Specific; Tubulin Alpha-1A Chain; Alpha-Tubulin 3, Brain-Specific; Hum-A-Tub1; Hum-A-Tub2; B-ALPHA-1; TBA1A_HUMAN;
Organism Species:	Rabbit
Clonality:	Polyclonal
React Species:	Human,Mouse,Rat,Chicken,Pig,Cow,
Applications:	WB=1:500-2000ELISA=1:500-1000IHC-P=1:400-800IHC-F=1:400-800ICC=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 TUBA1A + TUBA1B:401-451/451
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 tubulins. The genes encoding these microtubule constituents belong to 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, which are highly conserved among species. This gene encodes alpha tubulin and is highly similar to the mouse and rat Tuba1 genes. Northern blotting studies have shown that the gene expression is predominantly found in morphologically differentiated neurologic cells. This gene is one of three alpha-tubulin genes in a cluster on chromosome 12q. Mutations in this gene cause lissencephaly type 3 (LIS3) - a neurological condition characterized by microcephaly, mental retardation, and early-onset epilepsy and caused by defective neuronal migration. Alternative splicing results in multiple transcript variants encoding distinct isoforms. [provided by RefSeq, Jul 2012] **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:** Ubiquitously expressed with highest levels in Brain, Bone, Adipocyte, and Breast **Post-translational modifications:** Undergoes a tyrosination/detyrosination cycle, the cyclic removal and re-addition of a C-terminal tyrosine residue by the enzymes tubulin tyrosine carboxypeptidase (TTCP) and tubulin tyrosine ligase (TTL), respectively. 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 TTLL10 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 polyglutamylation, 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:** Q71U36 **Gene ID:** 7846 **Database links:** TUBA1A: Entrez Gene: 7846Human Entrez Gene: 22142Mouse Entrez Gene: 64158Rat Omim: 602529Human SwissProt: Q71U36Human SwissProt: P68369Mouse SwissProt: P68370Rat Unigene: 654422Human Unigene: 405359Mouse Unigene: 234326Rat TUBA1B: Entrez Gene: 10376Human

	Entrez Gene: 22143Mouse Entrez Gene: 500929Rat Omim: 602530Human SwissProt: P68363Human SwissProt: P05213Mouse SwissProt: Q6P9V9Rat Unigene: 524390Human Unigene: 392113Mouse Unigene: 99661Rat **Important Note:** This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Picture:	

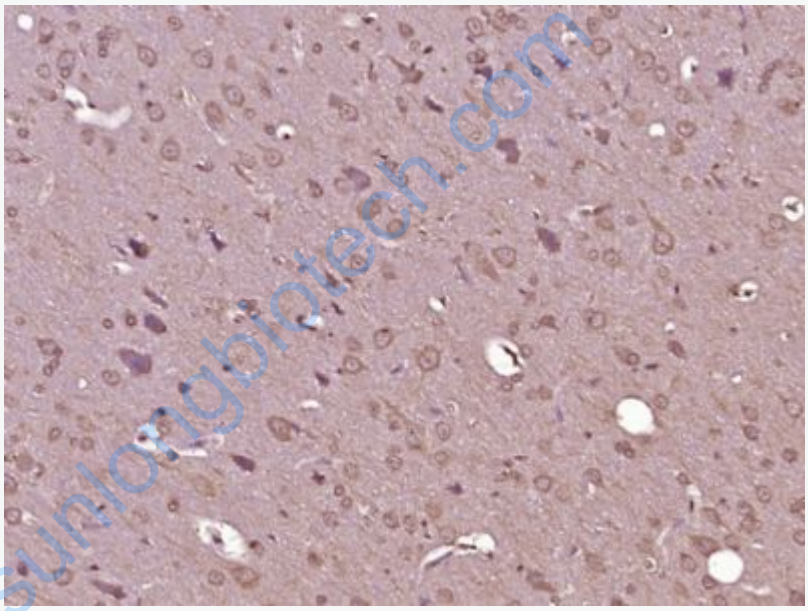
Sample: Cerebrum (Mouse)Lysate at 40 ug

Primary: Anti-TUBA1A + TUBA1B(SL20496R)at 1/300 dilution

Secondary: IRDye800CW Goat Anti-RabbitIgG at 1/20000 dilution

Predicted band size: 50kD

Observed band size: 50kD



Paraformaldehyde-fixed, paraffin embedded (Rat 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) Polyclonal Antibody, Unconjugated (SL20496R) at 1:400 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructionsand DAB staining.