

**alpha-Tubulin Antibody**  
Catalog # ASC12054**Specification**

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**alpha-Tubulin Antibody - Product Information**

Application	WB, IHC, IF
Primary Accession	<a href="#">Q71U36</a>
Other Accession	<a href="#">37492</a> , <a href="#">CAA25855</a> , <a href="#">7846</a>
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Application Notes	alpha-Tubulin antibody can be used for detection of alpha-Tubulin by Western blot at 1 - 2 µg/ml. Antibody can also be used for Immunohistochemistry starting at 2.5 µg/mL. For immunofluorescence start at 20 µg/mL.

**alpha-Tubulin Antibody - Additional Information****Other Names**

Tubulin alpha-1A, TUBA1A, TUBA3, LIS3

**Precautions**

alpha-Tubulin Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

**alpha-Tubulin Antibody - Protein Information**

**Name** TUBA1A

**Synonyms** TUBA3

**Function**

Tubulin is the major constituent of microtubules, a cylinder consisting of laterally associated linear protofilaments composed of alpha- and beta-tubulin heterodimers. Microtubules grow by the addition of GTP-tubulin dimers to the microtubule end, where a stabilizing cap forms. Below the cap, tubulin dimers are in GDP-bound state, owing to GTPase activity of alpha-tubulin.

**Cellular Location**

Cytoplasm, cytoskeleton. Cytoplasm, cytoskeleton, flagellum axoneme  
{ECO:0000250|UniProtKB:P68369}

**Tissue Location**

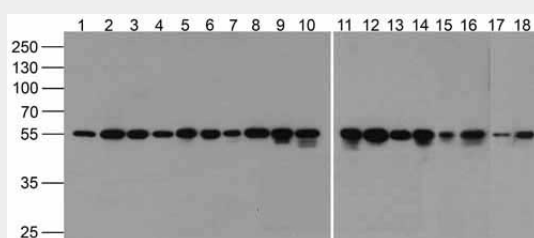
Expressed at a high level in fetal brain.

## alpha-Tubulin Antibody - Protocols

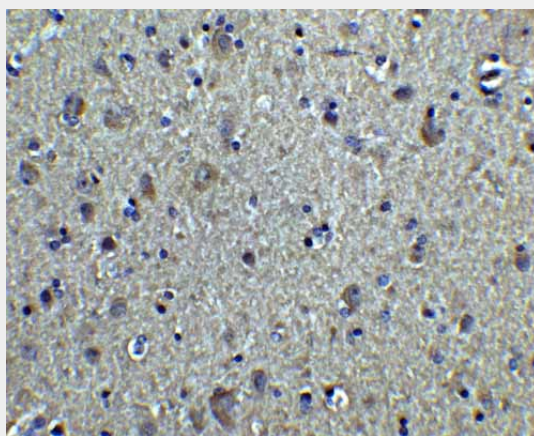
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

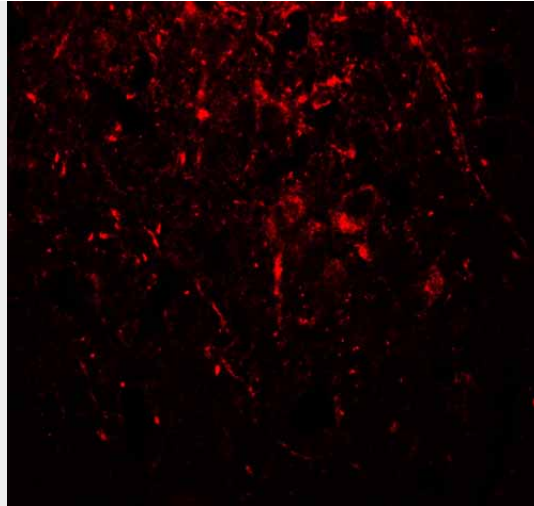
## alpha-Tubulin Antibody - Images



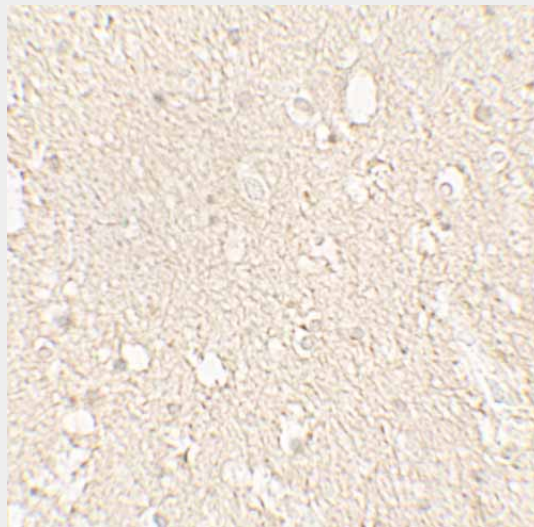
Western blot analysis of alpha-Tubulin in 293, Daudi, HeLa, HepG2, Jurkat, K562, NH3T3, Raji, Ramos, U937, Human brain, Mouse brain, Rat Brain, Rabbit Brain, Rabbit Spleen, Zebrafish, Mouse Liver and Chicken liver lysate at 1  $\mu$ g/mL.



Immunohistochemistry of alpha-Tubulin in human brain tissue with alpha-Tubulin antibody at 2.5  $\mu$ g/ml.



Immunofluorescence of alpha-Tubulin in human brain tissue with alpha-Tubulin antibody at 20 µg/mL.



Immunohistochemistry of alpha-Tubulin in human brain tissue with alpha-Tubulin antibody at 5 µg/mL.

### **alpha-Tubulin Antibody - Background**

alpha-Tubulin belongs to the tubulin superfamily, which is composed of six distinct families. Along with beta-tubulins, alpha-Tubulins are the major components of microtubules. These microtubules are involved in a wide variety of cellular activities ranging from mitosis and transport events to cell movement and the maintenance of cell shape. Alpha- and beta-tubulin dimers are assembled to 13 protofilaments that form a microtubule of 22-nm diameter (reviewed in 1). Tyrosine ligase adds a C-terminal tyrosine to monomeric alpha-Tubulin. Assembled microtubules can again be detyrosinated by a cytoskeleton-associated carboxypeptidase (2). Another post-translational modification of detyrosinated alpha-Tubulin is C-terminal polyglutamylation, which is characteristic of microtubules in neuronal cells and the mitotic spindle (3). Like GAPDH and  $\beta$ -Actin, this antibody makes an excellent loading control in immunoblots.

### **alpha-Tubulin Antibody - References**

McKean PG, Vaughan S, and Gull K. The extended tubulin family. *J. Cell Sci.* 2001; 114:2723-33.; Barra HA, Arce CA, and Argarana CE. Posttranslational tyrosination/detyrosination of tubulin. *Mol. Neurobiol.* 1988; 2:133-53.; Fukushima N, Furuta D, Hidaka Y, et al. Post-translational

modifications of tubulin in the nervous system. J. Neurochem. 2009; 109:683-693.;