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Alpha-tubulin Antibody (biotin)

Catalog # ASC12066

Product Information

Application	WB, E
Primary Accession	Q71U36
Other Accession	37492, CAA25855, 7846
Reactivity	Human, Mouse, Rat, Rabbit, Zebrafish, Chicken
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	50136
Application Notes	Biotin-Alpha-tubulin antibody can be used for detection of alpha-tubulin by Western blot at 1 - 2 g/ml.

Additional Information

Gene ID	7846
Other Names	Tubulin alpha-1A, TUBA1A, TUBA3, LIS3
Precautions	Alpha-tubulin Antibody (biotin) is for research use only and not for use in diagnostic or therapeutic procedures.

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.

Background

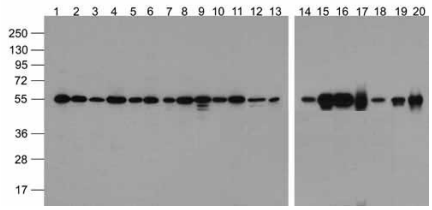
Alpha-tubulin belongs to the tubulin superfamily, which is composed of six distinct families. Along with beta-tubulins, alpha-tubulins are the major components of microtubules. These microtubules are involved in

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 β-Actin, this antibody makes an excellent loading control in immunoblots.

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.;Fukshima N, Furuta D, Hidaka Y, et al. Post-translational modifcations of tubulin in the nervous system. J. Neurochem. 2009; 109:683-693.;

Images



Western blot analysis of Alpha-tubulin in multiple cell and tissue lysates with Biotin-Alpha-tubulin antibody at 1 µg/ml. Lanes 1-20: 293, A431, A549, Daudi, HeLa, HepG2, Jurkat, K562, MOLT, 3T3, Raji, THP-1, U937, human brain, mouse brain, rat brain, rabbit brain, mouse lung, chicken small intestine, and zebrafish lysate, respectively.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.