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Tubulin Beta Antibody

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP50855

Product Information

Application	WB, IHC-P, IHC-F, IF, E
Primary Accession	P07437
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Calculated MW	49671
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human tubulin Beta
Epitope Specificity	61-160/444
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SUBCELLULAR LOCATION	Cytoplasmic, cytoskeleton.
SIMILARITY	Belongs to the tubulin family.
SUBUNIT	Dimer of alpha and beta chains. May interact with RNABP10. Interacts with PIFO. Interacts with MX1.
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 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).
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	This gene encodes a beta tubulin protein. This protein forms a dimer with alpha tubulin and acts as a structural component of microtubules. Mutations in this gene cause cortical dysplasia, complex, with other brain malformations 6. Alternative splicing results in multiple splice variants. There are multiple pseudogenes for this gene on chromosomes 1, 6, 7, 8, 9, and 13. [provided by RefSeq, Jun 2014]

Additional Information

Gene ID	203068
Other Names	Tubulin beta chain, Tubulin beta-5 chain, TUBB, TUBB5

Target/Specificity	Ubiquitously expressed with highest levels in spleen, thymus and immature brain.
Dilution	WB=1:10000-100000,IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500,Flow-Cyt =1ug/Test,ELISA=1:5000-10000
Format	0.01M TBS(pH7.4) with 1% BSA, 0.09% (W/V) sodium azide and 50% Glyce
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. 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.

Protein Information

Name	TUBB
Synonyms	TUBB5
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
Tissue Location	Ubiquitously expressed with highest levels in spleen, thymus and immature brain.

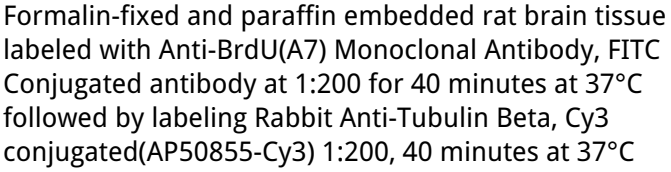
Background

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.

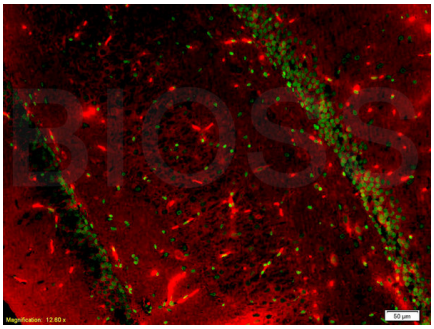
References

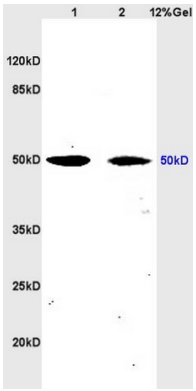
Lee M.G.-S.,et al.Cell 33:477-487(1983).
Hall J.L.,et al.Mol. Cell. Biol. 3:854-862(1983).
Crabtree D.V.,et al.Bioorg. Med. Chem. 9:1967-1976(2001).
Yu W.,et al.Submitted (JUN-1998) to the EMBL/GenBank/DDBJ databases.
Shiina S.,et al.Submitted (SEP-1999) to the EMBL/GenBank/DDBJ databases.

Images

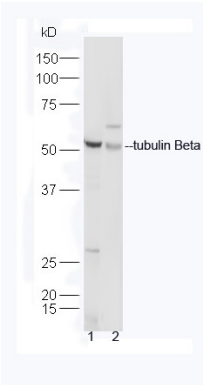


Formalin-fixed and paraffin embedded rat brain tissue labeled with Anti-BrdU(A7) Monoclonal Antibody, FITC Conjugated antibody at 1:200 for 40 minutes at 37°C followed by labeling Rabbit Anti-Tubulin Beta, Cy3 conjugated(AP50855-Cy3) 1:200, 40 minutes at 37°C





Lane 1:Mouse heart lysates; Lane 2: Human MCF7 cell lysates probed with Rabbit Anti-Tubulin Beta Polyclonal Antibody, Unconjugated (AP50855) at 1:300 overnight at 4˚C. Followed by a conjugated secondary antibody at 1:5000 for 90 min at 37˚C.



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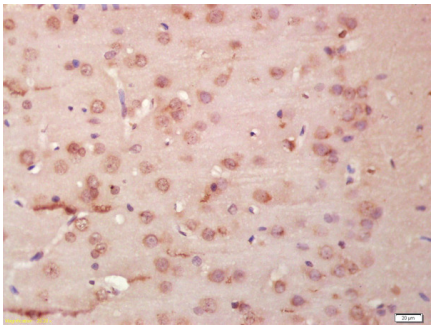
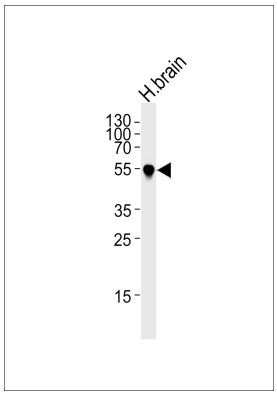
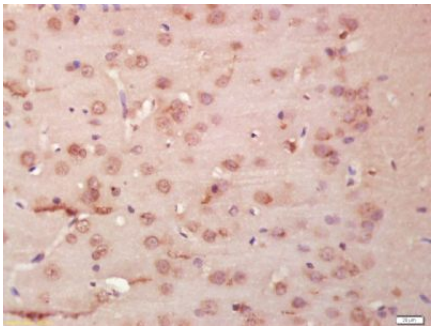


Formalin-fixed and paraffin embedded rat brain labeled with Anti-tubulin Beta Polyclonal Antibody, Unconjugated (AP50855) at 1:200 followed by conjugation to the secondary antibody and DAB staining



Lane 1: rat brain lysates Lane 2: rat heart lysates probed with Anti tubulin Beta Polyclonal Antibody, Unconjugated (AP50855) at 1:200 in 4˚C. Followed by conjugation to secondary antibody at 1:3000 90min in 37˚C. Predicted band 50kD. Observed band size: 50kD.



Tissue/cell: rat brain tissue; 4% Paraformaldehyde-fixed and paraffin-embedded; Antigen retrieval: citrate buffer (0.01M, pH 6.0), Boiling bathing for 15min; Block endogenous peroxidase by 3% Hydrogen peroxide for 30min; Blocking buffer at 37℃ for 20 min; Incubation: Anti-tubulin Beta Polyclonal Antibody, Unconjugated 1:200, overnight at 4°C, followed by conjugation to the secondary antibody and DAB staining

Citations

- Single-walled carbon-nanohorns improve biocompatibility over nanotubes by triggering less protein-initiated pyroptosis and apoptosis in macrophages.