

# Beta tubulin Rabbit pAb, Loading Control

Beta tubulin Rabbit pAb, Loading Control Catalog # AP50855

### **Product Information**

**Application** WB, IHC-P, IHC-F, IF

Primary Accession <u>P07437</u>

**Reactivity** Rat, Human, Mouse

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**Some glutamate residues at the C-terminus are polyglutamylated. This modifications 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

**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**

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]

#### 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**

Blank control:HL-60.

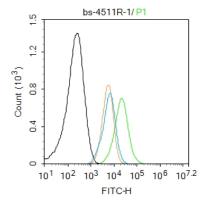
Primary Antibody (green line): Rabbit Anti-Beta tubulin

antibody (AP50855) Dilution: 1 µg /10^6 cells;

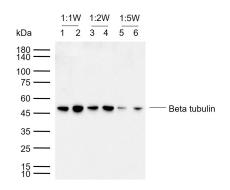
Isotype Control Antibody (orange line): Rabbit IgG . Secondary Antibody : Goat anti-rabbit IgG-AF488

Dilution: 1 µg /test.

Protocol



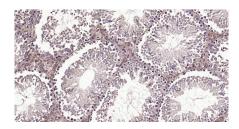
The cells were fixed with 4% PFA (10min at room temperature) and then permeabilized with 0.1% PBST for 20 min at room temperature. The cells were then incubated in 5% BSA to block non-specific protein-protein interactions for 30 min at room temperature . Cells stained with Primary Antibody for 30 min at room temperature. The secondary antibody used for 40 min at room temperature. Acquisition of 20,000 events was performed.



Sample:

Lane 1,3,5: Mouse Cerebellum tissue lysates
Lane 2,4,6: Rat Cerebellum tissue lysates
Primary: Anti-Beta tubulin (AP50855) at 1/10000~1/50000
dilution
Secondary: HRP conjugated Goat Anti-Rabbit IgG at
1/20000 dilution

Predicted band size: 50 kDa Observed band size: 48 kDa



Paraformaldehyde-fixed, paraffin embedded Mouse Testicles; Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15 min; Antibody incubation with Beta tubulin Polyclonal Antibody, Unconjugated (AP50855) at 1:200 overnight at 4°C, followed by conjugation to the SP Kit (Rabbit, SP-0023) and DAB (C-0010) staining.

### **Citations**

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

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