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beta Tubulin

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP22104a

Product Information

Application	WB, FC, IF, E
Primary Accession	P99024
Other Accession	Q17299, P12456, P09203, Q24560, Q9YHC3, Q27U48, O17449, P36221, Q6EVK8, Q13885, Q4R5B3, Q7TMM9, P85108, Q6B856, Q9BVA1, Q9CWF2, Q3KRE8, P52275, P32882, P83130, P61858, P61857, P13602, Q2T9S0, P09206, Q13509, Q60HC2, Q9ERD7, Q4QRB4, Q3ZBU7, P04350, Q4R4X8, Q9D6F9, Q3MHM5, P68371, P86221, P68
Reactivity	Rat, Mouse
Predicted	Bovine, Chicken, Human, Mouse, Pig, Rat, Canine, Rabbit
Host	Rabbit
Clonality	polyclonal
Isotype	Rabbit IgG
Clone Names	RB55943
Calculated MW	49671

Additional Information

Gene ID	22154
Other Names	Tubulin beta-5 chain, Tubb5
Target/Specificity	This antibody is generated from a rabbit immunized with a KLH conjugated synthetic peptide between 46-78 amino acids from human.
Dilution	WB~~1:2000 FC~~1:25 IF~~1:25 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	beta Tubulin is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	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. Expressed in embryonic brain, including throughout the developing cortex and in the subventricular zone. Also found in radial glial cells, intermediate progenitors, migrating neurons and postmitotic neurons (PubMed:23246003). Expressed in skin and developing hair follicle (PubMed:26637975)

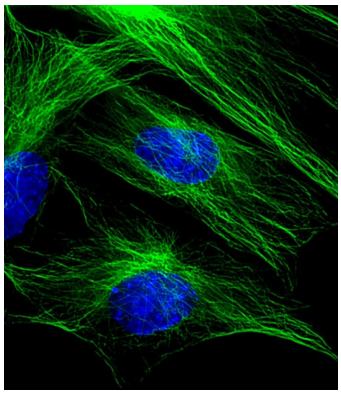
Background

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.

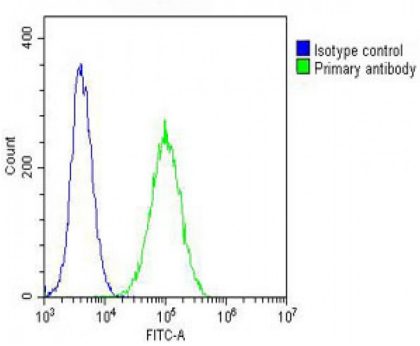
References

Wang D.,et al.J. Cell Biol. 103:1903-1910(1986).
Carninci P.,et al.Science 309:1559-1563(2005).
Church D.M.,et al.PLoS Biol. 7:E1000112-E1000112(2009).
Lubec G.,et al.Submitted (JUL-2007) to UniProtKB.
Lewis S.A.,et al.J. Cell Biol. 101:852-861(1985).

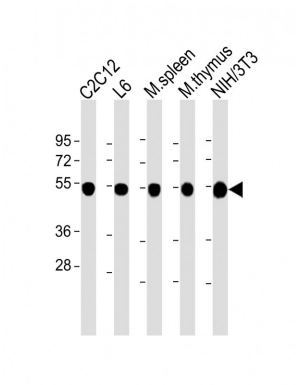
Images



Immunofluorescent analysis of 4% paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized C2C12 (mouse myoblast cell line) cells labeling beta Tubulin with AP22104a at 1/25 dilution, followed by Dylight® 488-conjugated goat anti-rabbit IgG (NK179883) secondary antibody at 1/200 dilution (green). Immunofluorescence image showing cytoplasm staining on C2C12 cell line. The nuclear counter stain is DAPI (blue).



Overlay histogram showing NIH/3T3 cells stained with AP22104a (green line). The cells were fixed with 2% paraformaldehyde (10 min) and then permeabilized with 90% methanol for 10 min. The cells were then icubated in 2% bovine serum albumin to block non-specific protein-protein interactions followed by the antibody (AP22104a, 1:25 dilution) for 60 min at 37ºC. The secondary antibody used was Goat-Anti-Rabbit IgG, DyLight® 488 Conjugated Highly Cross-Adsorbed(OH191631) at 1/200 dilution for 40 min at 37ºC. Isotype control antibody (blue line) was rabbit IgG (1µg/1x10^6 cells) used under the same conditions.



Acquisition of >10, 000 events was performed.

All lanes : Anti-beta Tubulin at 1:2000 dilution Lane 1: C2C12 whole cell lysate Lane 2: L6 whole cell lysate Lane 3: mouse spleen lysate Lane 4: mouse thymus lysate Lane 5: NIH/3T3 whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 50 kDa Blocking/Dilution buffer: 5% NFDM/TBST.

Citations

- Phosphatases Decrease Water and Urea Permeability in Rat Inner Medullary Collecting Ducts
- Aldosterone Decreases Vasopressin-Stimulated Water Reabsorption in Rat Inner Medullary Collecting Ducts

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