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TUBB3 Antibody (N-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP5752A

Product Information

Application	WB, IHC-P, FC, E
Primary Accession	Q13509
Other Accession	P09652, Q4QRB4, Q9ERD7, Q60HC2, Q2T9S0, NP_006077.2
Reactivity	Human, Mouse
Predicted	Bovine, Monkey, Rat, Chicken, Canine, Rabbit
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB21098
Calculated MW	50433
Antigen Region	36-63

Additional Information

Gene ID	10381
Other Names	Tubulin beta-3 chain, Tubulin beta-4 chain, Tubulin beta-III, TUBB3, TUBB4
Target/Specificity	This TUBB3 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 36-63 amino acids of human TUBB3.
Dilution	WB~~1:1000 IHC-P~~1:100~500 FC~~1:10~50 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.05% (V/V) Proclin 300. 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	TUBB3 Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	TUBB3
Synonyms	TUBB4
Function	Tubulin is the major constituent of microtubules, protein filaments

	consisting of alpha- and beta-tubulin heterodimers (PubMed:34996871, PubMed:38305685, PubMed:38609661). Microtubules grow by the addition of GTP-tubulin dimers to the microtubule end, where a stabilizing cap forms (PubMed:34996871, PubMed:38305685, PubMed:38609661). Below the cap, alpha-beta tubulin heterodimers are in GDP-bound state, owing to GTPase activity of alpha-tubulin (PubMed:34996871, PubMed:38609661). TUBB3 plays a critical role in proper axon guidance and maintenance (PubMed:20074521). Binding of NTN1/Netrin-1 to its receptor UNC5C might cause dissociation of UNC5C from polymerized TUBB3 in microtubules and thereby lead to increased microtubule dynamics and axon repulsion (PubMed:28483977). Plays a role in dorsal root ganglion axon projection towards the spinal cord (PubMed:28483977).
Cellular Location	Cytoplasm, cytoskeleton. Cell projection, growth cone {ECO:0000250|UniProtKB:Q9ERD7}. Cell projection, lamellipodium {ECO:0000250|UniProtKB:Q9ERD7}. Cell projection, filopodium {ECO:0000250|UniProtKB:Q9ERD7}
Tissue Location	Expression is primarily restricted to central and peripheral nervous system. Greatly increased expression in most cancerous tissues.

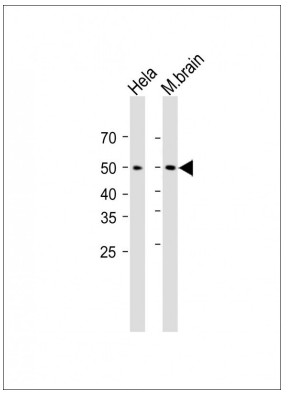
Background

Beta III tubulin is abundant in the central and peripheral nervous systems (CNS and PNS) where it is prominently expressed during fetal and postnatal development. As exemplified in cerebellar and sympathoadrenal neurogenesis, the distribution of beta III is neuron-associated, exhibiting distinct temporospatial gradients according to the regional neuroepithelia of origin. However, transient expression of this protein is also present in the subventricular zones of the CNS comprising putative neuronal- and/or glial precursor cells, as well as in Kulchitsky neuroendocrine cells of the fetal respiratory epithelium. This temporally restricted, potentially non-neuronal expression may have implications in the identification of presumptive neurons derived from embryonic stem cells.

References

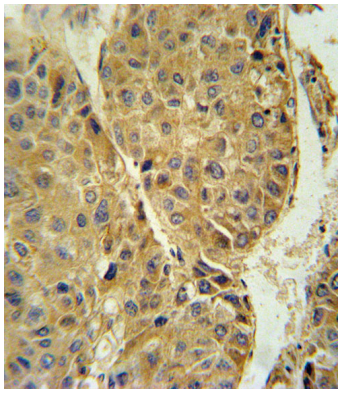
Khan, I.A., et al. Biochemistry 35(12):3704-3711(1996)
Khan, I.A., et al. Biochemistry 35(12):3704-3711(1996)
Vinores, S.A., et al. Exp. Eye Res. 60(4):385-400(1995)

Images

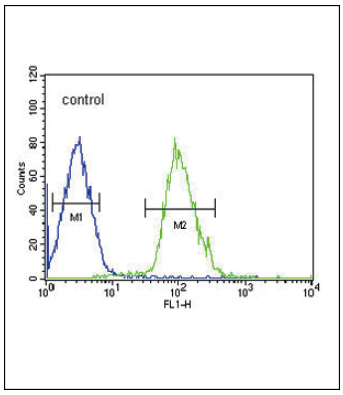


All lanes: Anti-TUBB3 Antibody (N-term) at 1:1000 dilution Lane 1: Hela whole cell lysate Lane 2: Mouse brain lysate Lysates/proteins at 20 µg per lane. Secondary: Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated (ASP1615) at 1/15000 dilution. Observed band size: 50. 4 KDa Blocking/Dilution buffer: 5% NFDM/TBST.

TUBB3 Antibody (N-term) (Cat. #AP5752a) immunohistochemistry analysis in formalin fixed and paraffin embedded human hepatocarcinoma followed by



peroxidase conjugation of the secondary antibody and DAB staining. This data demonstrates the use of the TUBB3 Antibody (N-term) for immunohistochemistry. Clinical relevance has not been evaluated.



TUBB3 Antibody (N-term) (Cat. #AP5752a) flow cytometric analysis of HepG2 cells (right histogram) compared to a negative control cell (left histogram).FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.

Citations

- Calpain-dependent cytoskeletal rearrangement exploited for anthrax toxin endocytosis.
- miR-501 is upregulated in cervical cancer and promotes cell proliferation, migration and invasion by targeting CYLD.
- Pejvakin, a Candidate Stereociliary Rootlet Protein, Regulates Hair Cell Function in a Cell-Autonomous Manner.

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