

APC anti-Tubulin β 3 (TUBB3) Antibody

Catalog# / Size	801219 / 25 tests 801220 / 100 tests
Clone	TUJ1
Regulatory Status	RUO
Other Names	CDCBM, CDCBM1, CFEOM3, CFEOM3A, FEOM3, TUBB4, Tubulin beta-3 chain, tubulin beta-III, tubulin beta-4 chain, class III beta-tubulin
Isotype	Mouse IgG2a, κ
Description	Tubulin is the main component of microtubules. In adults, tubulin beta 3 (TUBB3) is primarily expressed in neurons and is commonly used as a neuronal marker. It plays an important role in neuronal cell proliferation and differentiation. Mutations in this gene cause congenital fibrosis of the type 3 extraocular muscles. Tubulin beta 3 (TUBB3) is also found in a wide range of tumors. Studies indicate that it is a predictive and prognostic marker in various tumors.

Product Details

Verified Reactivity	Human, Mouse, Rat
Antibody Type	Monoclonal
Host Species	Mouse
Immunogen	This antibody was raised against microtubules derived from rat brain.
Formulation	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide and BSA (origin USA)
Preparation	The antibody was purified by affinity chromatography and conjugated with APC under optimal conditions.
Concentration	Lot-specific (to obtain lot-specific concentration, please enter the lot number in our Concentration and Expiration Lookup or Certificate of Analysis online tools.)
Storage & Handling	The antibody solution should be stored undiluted between 2°C and 8°C, and protected from prolonged exposure to light. Do not freeze.
Application	ICFC - Quality tested
Recommended Usage	Each lot of this antibody is quality control tested by intracellular immunofluorescent staining with flow cytometric analysis . For flow cytometric staining, the suggested use of this reagent is 5 μ L per million cells in 100 μ L staining volume or 5 μ L per 100 μ L of whole blood. It is recommended that the reagent be titrated for optimal performance for each application.
Excitation Laser	Red Laser (633 nm)
Application Notes	Additional reported applications (for the relevant formats) include: flow cytometry ⁴ , immunofluorescence microscopy ^{1-5,7} , immunohistochemistry ^{5,7} , Western blotting ⁸ , and spatial biology (IBEX) ^{9,10} . This antibody is well characterized and highly reactive to neuron specific Class III β -tubulin (β III). TUJ1 does not identify β -tubulin found in glial cells. TUJ1 recognizes an epitope located within the last 15 C-terminal residues ⁸ .

Application References

(PubMed link indicates BioLegend citation)

1. Nishimura K, *et al.* 2017. *PLoS One*. 12(1): e0170568. **(ICC)**
2. Jongbloets J, *et al.* 2017. *Nat Commun*. 8: 14666. **(ICC)** [PubMed](#)
3. Liu W.J, *et al.* 2015. *Eur J Histochem*. 59(1): 2464. **(ICC)** [PubMed](#)
4. Chintalapudi SR, *et al.* 2016. *Front Aging Neurosci*. 8:93. **(FC, ICC)** [PubMed](#)
5. Ambasadhan R, *et al.* 2011. *Cell Stem Cell*. 9(2):113. **(IHC, ICC)**
6. Hu X, *et al.* 2006. *Nature Neurosci*. 9(12):1520. **(WB)** [PubMed](#)
7. Zechner D., *et al.* 2003. *Develop Biology*. 258(2):406. **(ICC, IHC)**
8. Lee MK, *et al.* 1990. *Proc. Natl. Acad. Sci. USA* 18:7195. **(WB)**
9. Radtke AJ, *et al.* 2020. *Proc Natl Acad Sci USA*. 117:33455-33465. (SB) [PubMed](#)

RRID AB_2876748 (BioLegend Cat. No. 801219)
AB_2876748 (BioLegend Cat. No. 801220)

Antigen Details

Structure	Tubulin β 3 is a 450 amino acid protein with a molecular mass of ~50 kD.
Distribution	Tissue distribution: central and peripheral nervous system. Cellular distribution: cytosol, cytoskeleton and nucleus.
Function	Tubulin β 3 is the major constituent of microtubules, and plays a critical role in proper axon guidance and maintenance.
Interaction	Alpha tubulin, kinesin and dynein.
Cell Type	Mature Neurons, Neural Stem Cells
Biology Area	Cell Biology, Neuroscience, Neuroscience Cell Markers, Stem Cells
Molecular Family	Microtubules
Antigen References	1. Zhao X, <i>et al.</i> 2017. <i>Med Sci Monit.</i> 22: 3915. 2. Lebok P, <i>et al.</i> 2016. <i>Oncol Lett.</i> 11(3):1987. 3. Du J, <i>et al.</i> 2015. <i>BMC Cancer.</i> 15:536. PubMed 4. Rogue DM., <i>et al.</i> 2013. <i>Clin Exp Metastasis.</i> 31(1): 101. 5. Ploussard G, <i>et al.</i> 2010. <i>Cancer Res.</i> 70(22):9253. PubMed
Gene ID	10381

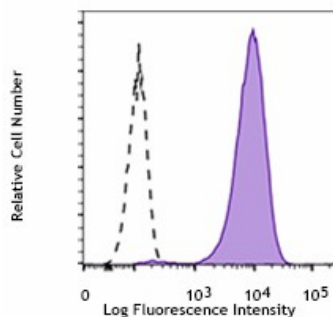
Related Protocols

[Immunocytochemistry Staining Protocol](#)

Other Formats

Alexa Fluor® 488 anti-Tubulin β 3 (TUBB3), Purified anti-Tubulin β 3 (TUBB3), Alexa Fluor® 594 anti-Tubulin β 3 (TUBB3), Alexa Fluor® 647 anti-Tubulin β 3 (TUBB3), HRP anti-Tubulin β 3 (TUBB3), Biotin anti-Tubulin β 3 (TUBB3), APC anti-Tubulin β 3 (TUBB3), PE/Cyanine7 anti-Tubulin β 3 (TUBB3), PerCP/Cyanine5.5 anti-Tubulin β 3 (TUBB3), PE anti-Tubulin β 3 (TUBB3)

Product Data



Human lung adenocarcinoma cell line A549 was treated with Fixation Buffer (Cat. No. 420801) and Intracellular Staining Permeabilization Wash Buffer (Cat. No. 421002), and then stained with anti-Tubulin β 3 (TUBB3) (clone TUJ1) APC (filled histogram) or mouse IgG2a, κ APC isotype control (open histogram).

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