

PE/Cyanine7 anti-Tubulin β 3 (TUBB3)

Catalog # / 4606090 / 100 tests
Size: 4606085 / 25 tests

Clone: TUJ1

Isotype: Mouse IgG2a, κ

Immunogen: This antibody was raised against microtubules derived from rat brain.

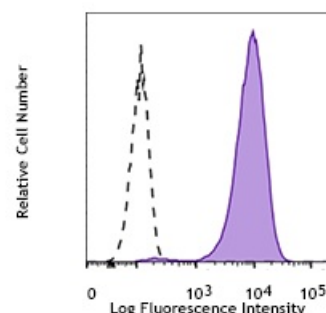
Reactivity: Human, Mouse, Rat

Preparation: The antibody was purified by affinity chromatography and conjugated with PE/Cyanine7 under optimal conditions.

Formulation: Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide and 0.2% (w/v) BSA (origin USA)

Workshop Number: IV M-505

Concentration: Lot-specific

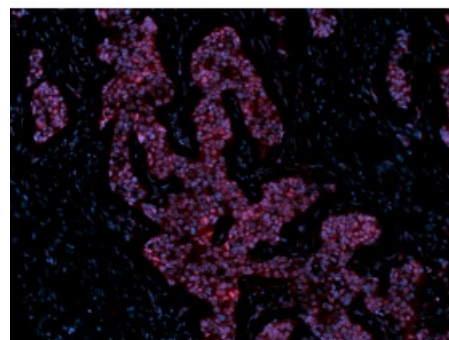


Human lung adenocarcinoma cell line A549 was treated with Fixation Buffer (Cat No. 420801) and Intracellular Staining Permeabilization Wash Buffer (Cat No. 421002), and then stained with anti-Tubulin β 3 (TUBB3) (clone TUJ1) PE/Cyanine7 (filled histogram) or mouse IgG2a, κ PE/Cyanine7 isotype control (open histogram).

Applications:

Applications: Intracellular Staining for Flow Cytometry

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.



Formalin-fixed paraffin-embedded human breast cancer tissue slices were deparaffinized and rehydrated. Antigen retrieval was done with Tris-Buffered Saline 1X (1.0 M, pH 7.4) at 95°C for 40 minutes, washed with PBS/0.05% Tween 20 twice for five minutes, permeabilized with 0.5% Triton X-100 for ten minutes, and blocked with 5% FBS and 0.2% gelatin for 30 minutes. Then, the slices were stained with 5 μ g/mL anti-EGFR (clone A19002A) Alexa Fluor® 647 (red) at 4°C overnight. Nuclei were counterstained with DAPI (green). The image was captured

Application Additional reported applications (for with a 10X objective.

Notes: the relevant formats) include: flow cytometry⁴, immunofluorescence microscopy^{1-5,7}, immunohistochemistry^{5,7}, and Western blotting⁸.

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 residues⁸.

**Application
References:**

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. Ambasudhan 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)**

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.

**Antigen
References:**

1. Zhao X, *et al.* 2017. *Med Sci Monit*. 22: 3915.
2. Lebok P, *et al.* 2016. *Oncol Lett*. 11(3):1987.
3. Du J, *et al.* 2015. *BMC Cancer*. 15:536. [PubMed](#)
4. Rogue DM., *et al.* 2013. *Clin Exp Metastasis*. 31(1): 101.
5. Ploussard G, *et al.* 2010. *Cancer Res*. 70(22):9253. [PubMed](#)