

# beta-3 Tubulin Monoclonal Antibody (2G10-TB3), Alexa Fluor™ 488, eBioscience™

Product Details	
Size	100 µg
Species Reactivity	Bovine, Human, Mouse, Rat
Published Species	Human
Host/Isotype	Mouse / IgG2a, kappa
Recommended Isotype Control	Mouse IgG2a kappa Isotype Control (eBM2a), Alexa Fluor™ 488, eBioscience™
Class	Monoclonal
Type	Antibody
Clone	2G10-TB3
Conjugate	Alexa Fluor™ 488
Excitation/Emission Max	499/520 nm
Form	Liquid
Concentration	0.5 mg/mL
Purification	Affinity chromatography
Storage buffer	PBS, pH 7.2
Contains	0.09% sodium azide
Storage conditions	4° C, store in dark, DO NOT FREEZE!
RRID	AB_2574421

Applications	Tested Dilution	Publications
Immunohistochemistry (Paraffin) (IHC (P))	Assay-Dependent	-
Immunohistochemistry (Frozen) (IHC (F))	Assay-Dependent	-
Immunocytochemistry (ICC/IF)	10 µg/mL	3 Publications
Flow Cytometry (Flow)	-	1 Publication

## Product Specific Information

**Description:** The 2G10 monoclonal antibody recognizes beta tubulin class III, a member of the large family of tubulins that are components of the microtubules of the cytoskeletal network. Beta tubulin class III expression is exclusively found in neuronal cells of adult mammals. Although expression has been mainly found in neuronal cells, during fetal development, transient expression has been documented in both glial and neuronal precursors localized to the subventricular zone. Identification of beta tubulin class III expression is useful as a structural marker for developing and mature neural cells. Given the high degree of conservation of this protein across species, the 2G10 clone is expected to recognize human, mouse, rat, and bovine beta tubulin class III.

**Applications Reported:** This 2G10-TB3 antibody has been reported for use in immunohistochemical staining of frozen tissue sections, immunohistochemical staining of formalin-fixed paraffin embedded tissue sections, microscopy, and immunocytochemistry.

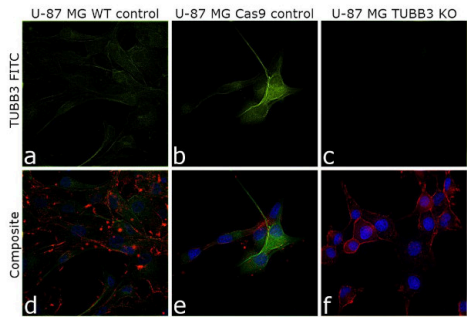
**Applications Tested:** This 2G10-TB3 antibody has been tested by immunocytochemistry of formaldehyde-fixed and permeabilized cells and can be used at less than or equal to 10 µg/mL. It is recommended that the antibody be carefully

titrated for optimal performance in the assay of interest.

Excitation: 488 nm; Emission: 519 nm; Laser: Blue Laser.

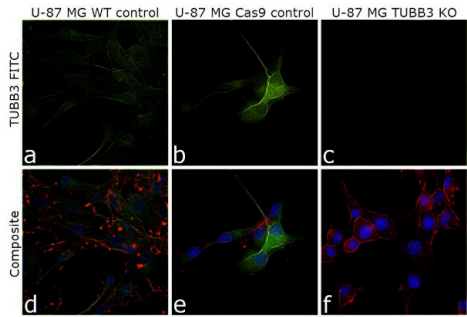
Filtration: 0.2 µm post-manufacturing filtered.

**Product Images For beta-3 Tubulin Monoclonal Antibody (2G10-TB3), Alexa Fluor™ 488, eBioscience™**



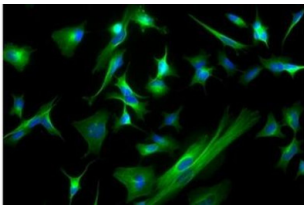
**beta-3 Tubulin Antibody (53-4510-82)**

Antibody specificity was demonstrated by CRISPR-Cas9 mediated knockout of target protein. A loss of signal was observed for target protein in beta-3 Tubulin (TUBB3) KO cell line compared to control cell line using beta-3 Tubulin Monoclonal Antibody, Alexa Fluor® 488 (Product # 53-4510-82). {KO}



**beta-3 Tubulin Antibody (53-4510-82) in ICC/IF**

Knockout of beta-3 Tubulin (TUBB3) was achieved by CRISPR-Cas9 genome editing. Immunofluorescence analysis was performed on wild type U-87 MG cells (panel a,d), U-87 MG Cas9 cells (panels b,e) and U-87 MG beta-3 Tubulin KO cells (panel c,f). Cells were fixed, permeabilized, and labelled with beta-3 Tubulin Monoclonal Antibody, Alexa Fluor® 488 (Product # 53-4510-82) (10 µg/mL). Nuclei (blue) were stained using ProLong™ Diamond Antifade Mountant with DAPI (Product # P36962), and Rhodamine Phalloidin (Product # R415) (1:300) was used for cytoskeletal F-actin (red) staining. Loss of signal (panel c,f) upon CRISPR mediated knockout (KO) confirms that antibody is specific to beta-3 Tubulin (green). The images were captured at 60X magnification.



**beta-3 Tubulin Antibody (53-4510-82) in ICC/IF**

Immunocytochemistry of fixed and permeabilized SK-N-SH cells using 10 µg/mL Anti-Beta Tubulin Class III Alexa Fluor® 488. Nuclei are stained with DAPI.

[View more figures on thermofisher.cn](https://thermofisher.cn)

Immunocytochemistry (3)

<p>The Journal of clinical investigation</p> <p><b>Functional 64 acetylcholine receptor expression enables pharmacological testing of nicotinic agonists with analgesic properties.</b></p> <p>"53-4510-82 was used in Immunocytochemistry to identify roles for IRE1 and BARP in neurotransmitter receptor assembly and unlock drug discovery for the previously elusive 64 receptor."</p> <p>Authors: Knowland D,Gu S,Eckert WA,Dawe GB,Matta JA,Limberis J,Wickenden AD,Bhattacharya A,Bredt DS</p>	<p>Year 2020</p> <p>Species Human</p>
<p>Journal of clinical medicine</p> <p><b>A Novel Bioengineered Functional Motor Unit Platform to Study Neuromuscular Interaction.</b></p> <p>"Published figure using beta-3 Tubulin monoclonal antibody (Product # 53-4510-82) in Immunocytochemistry"</p> <p>Authors: Saini J,Faroni A,Reid AJ,Mamchaoui K,Mouly V,Butler-Browne G,Lightfoot AP,McPhee JS,Degens H,Al-Shanti N</p>	<p>Year 2020</p> <p>Species Human</p> <p>Dilution 1:400</p>

[View more ICC/IF references on thermofisher.cn](#)

Flow Cytometry (1)

<p>Molecular autism</p> <p><b>Role of <i>miR-146a</i> in neural stem cell differentiation and neural lineage determination: relevance for neurodevelopmental disorders.</b></p> <p>"Published figure using beta-3 Tubulin monoclonal antibody (Product # 53-4510-82) in Flow Cytometry"</p> <p>Authors: Nguyen LS,Fregeac J,Bole-Feysot C,Cagnard N,Iyer A,Anink J,Aronica E,Alibeu O,Nitschke P,Colleaux L</p>	<p>Year 2018</p>
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