

Anti-Beta-Tubulin III Antibody, Clone AA10, Alexa Fluor® 488



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Antibodies

Mouse monoclonal IgG2a antibody
against human, mouse, rat beta-
tubulin III, Alexa Fluor® 488-
conjugated

Catalog #60100AD
#60100AD.1

100 µg 0.5 mg/mL
25 µg 0.5 mg/mL

Product Description

The AA10 antibody reacts with beta-tubulin III, an ~50 - 55 kDa structural protein that is a constituent of tubulin. Tubulin is the major component of microtubules within the cytoskeleton and is assembled from heterodimers of alpha and beta tubulin subunits. The beta III isoform of tubulin, also known as neuron-specific class III beta-tubulin, is expressed primarily in neurons and is widely used as a marker to distinguish neurons from other cell types. Beta-tubulin III contributes to microtubule formation in neuronal cell bodies and axons, a function involving GTP binding, and plays roles in axonal transport, neuronal cell proliferation, and differentiation. It is highly expressed in several types of cancer and is a predictive and prognostic marker for various tumors, for example, being found in neoplastic but not in normal glial cells. The AA10 antibody is expected to recognize all mammalian homologs of beta-tubulin III.

Target Antigen Name:	Beta-Tubulin III
Alternative Names:	Class 3 beta-tubulin, class III beta-tubulin, MC1R, neuron-specific class 3 beta-tubulin, neuron-specific class III beta-tubulin, TUBB 3, TUBB3, tubulin beta 3, tubulin beta 4, tubulin beta III
Gene ID:	10381
Species Reactivity:	Human, Mouse, Rat, Other Mammals
Host Species:	Mouse
Clonality:	Monoclonal
Clone:	AA10
Isotype:	IgG2a, kappa
Immunogen:	Synthetic peptide corresponding to amino acids 436 - 450 of beta-tubulin III conjugated to keyhole limpet hemocyanin
Conjugate:	Alexa Fluor® 488

Applications

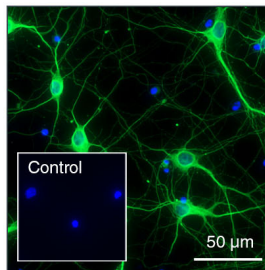
Verified:	ICC, IF
Reported:	FC
Special Applications:	This antibody clone has been verified for labeling neural stem and progenitor cells grown with STEMdiff™ Neural Induction Medium (Catalog #05835), STEMdiff™ Neural Progenitor Medium (Catalog #05833), NeuroCult™ NS-A Proliferation Kit (Human; Catalog #05751), NeuroCult™ Proliferation Kit (Mouse; Catalog #05702), NeuroCult™ NS-A Proliferation Kit (Rat; Catalog #05771) and NeuroCult™ SM1 Neuronal Culture Kit (Catalog #05712).

Abbreviations: CellSep: Cell separation; ChIP: Chromatin immunoprecipitation; FA: Functional assay; FACS: Fluorescence activated cell sorting; FC: Flow cytometry; ICC: Immunocytochemistry; IF: Immunofluorescence microscopy; IHC: Immunohistochemistry; IP: Immunoprecipitation; RIA: Radioimmunoassay; WB: Western blotting

Properties

Formulation:	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide
Purification:	The antibody was purified by affinity chromatography and conjugated with Alexa Fluor® 488 under optimal conditions. The solution is free of unconjugated Alexa Fluor® 488.
Stability and Storage:	Product stable at 2 - 8°C when stored undiluted. Do not freeze. Protect product from prolonged exposure to light. For product expiry date, please contact techsupport@stemcell.com .
Directions for Use:	For immunocytochemistry the suggested use of this antibody is ≤ 1.5 µg/mL. It is recommended that the antibody be titrated for optimal performance for each application.

Data



E18 cortical rat neurons were cultured using the NeuroCult™ SM1 Neuronal Culture Kit on poly-lysine-coated glass coverslips, then fixed and labeled with Anti-Beta-Tubulin III Antibody, Clone AA10, Alexa Fluor® 488 (green), and counter-stained with DAPI (blue). Inset shows cells labeled with Mouse IgG2a, kappa Isotype Control Antibody, Clone MOPC-173, Alexa Fluor® 488 (Catalog #60071AD), and counter-stained with DAPI.

Related Products

For a complete list of antibodies, including other conjugates, sizes and clones, as well as related products available from STEMCELL Technologies, please visit our website at www.stemcell.com/antibodies or contact us at techsupport@stemcell.com.

References

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4. Mobarakeh ZT et al. (2012) Human endometrial stem cells as a new source for programming to neural cells. *Cell Biol Int Rep* 19(1): e00015. (ICC, IF)
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7. Koh Y et al. (2009) Class III beta-tubulin, but not ERCC1, is a strong predictive and prognostic marker in locally advanced head and neck squamous cell carcinoma. *Ann Oncol* 20(8): 1414–9. (IHC)
8. Dráberová E et al. (1998) Expression of class III beta-tubulin in normal and neoplastic human tissues. *Histochem Cell Biol* 109(3): 231–9. (ICC, IF, IHC, WB)
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10. Lee MK et al. (1990) Posttranslational modification of class III beta-tubulin. *Proc Natl Acad Sci USA* 87(18): 7195–9. (Immunoaffinity chromatography, WB)

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