Anti-Human Beta-Tubulin III Antibody, Clone 2G10-TB3

Antibodies

Mouse monoclonal IgG2a antibody against human, mouse, rat beta-tubulin III, unconjugated

Catalog #60092	100 µg	0.5 mg/mL
#60092.1	25 µg	0.5 mg/mL

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Product Description

The 2G10-TB3 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 2G10-TB3 antibody is expected to recognize all mammalian homologs of beta-tubulin III and the epitope has reportedly been mapped to the extreme C-terminal amino acids, EAQGPK.

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:	2G10-TB3
Isotype:	IgG2a, kappa
Immunogen:	Synthetic peptide corresponding to amino acids 436 - 450 of beta-tubulin III conjugated to keyhole limpet hemocyanin
Conjugate:	Unconjugated

Applications

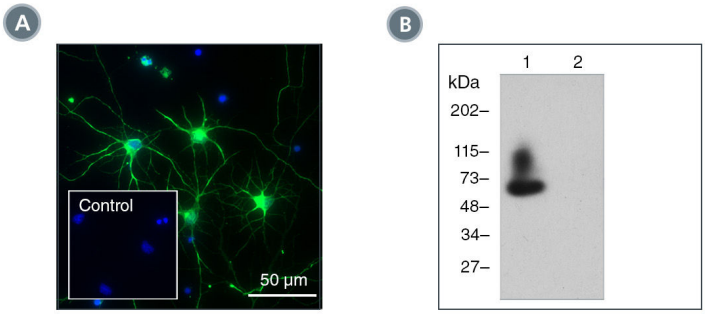
Verified:	ICC, IF, WB
Reported:	FC, ICC, IF, IHC, IP, WB
Special Applications:	This antibody clone has been verified for labeling neural stem and progenitor cells grown with STEMdiff™ Neural Induction Medium (Catalog #05835), STEMdiff™ Neural Progenitor Medium (Catalog #05833), NeuroCult™ NS-A Proliferation Kit (Human; Catalog #05751), NeuroCult™ Proliferation Kit (Mouse & Rat; Catalog #05702), 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:	Aqueous buffer containing 0.09% sodium azide, may contain carrier protein/stabilizer
Purification:	The antibody was purified by column chromatography.
Stability and Storage:	Product stable at 2 - 8°C when stored undiluted. Do not freeze. For product expiry date, please contact techsupport@stemcell.com.
Directions for Use:	For immunocytochemistry the suggested use of this antibody is ≤ 5 µg/mL. It is recommended that the antibody be titrated for optimal performance for each application.

Data



(A) E18 cortical rat neurons were cultured using NeuroCult™ SM1 Neuronal Culture Kit on poly-lysine-coated glass coverslips, then fixed and labeled with Anti-Human Beta-Tubulin III Antibody, Clone 2G10-TB3, followed by donkey anti-mouse IgG, Alexa Fluor® 488. Nuclei were counterstained with DAPI. Inset shows cells labeled with a mouse IgG2a, kappa isotype control antibody followed by donkey anti-mouse IgG, Alexa Fluor® 488, and counterstained with DAPI.
(B) Western blot analysis of denatured/reduced cell lysates with Anti-Beta Tubulin III Antibody, Clone 2G10-TB3. Lane 1, adult rat brain cortical cells; lane 2 (negative control), mouse E13.5 neural progenitor cells cultured with NeuroCult™ Proliferation Kit (Mouse & Rat).

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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