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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TOLL FREE PHONE 1 800 667 0322 • PHONE +1 604 877 0713
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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

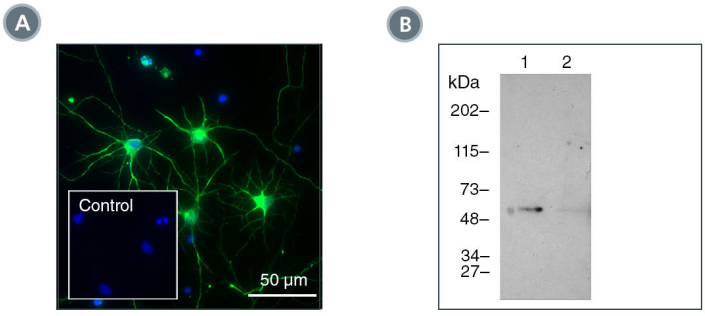
Verified:	ICC, IF, WB
Reported:	FC, ICC, IF, IHC, IP, WB
Special Applications:	This antibody clone has been verified for labeling neural stem and progenitor cells grown with STEMdiff™ Neural Induction Medium (Catalog #05835), STEMdiff™ Neural Progenitor Medium (Catalog #05833), NeuroCult™ NS-A Proliferation Kit (Human; Catalog #05751), NeuroCult™ Proliferation Kit (Mouse; 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; FC: Flow cytometry; ICC: Immunocytochemistry; IF: Immunofluorescence microscopy; IHC: Immunohistochemistry; IP: Immunoprecipitation; 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 the 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, and counterstained with DAPI. Inset shows cells incubated 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-Human 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).

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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