Neuron-specific β-III Tubulin Antibody

Monoclonal Mouse IgG_{2A} Clone # TuJ-1

Catalog Number: MAB1195

DESCRIPTION

Specificity	Detects mammalian and chicken neuron-specific β-III tubulin but not other β-tubulin isotypes in Western blots.
Source	Monoclonal Mouse IgG_{2A} Clone # TuJ-1
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Rat brain-derived microtubules
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 μm filtered solution in PBS.

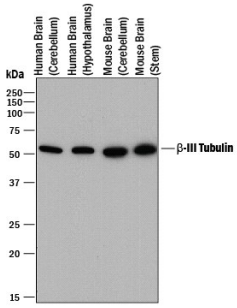
APPLICATIONS

Please Note: *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

	Recommended Concentration	Sample
Western Blot	0.2 µg/mL	See Below
Immunocytochemistry	8-25 µg/mL	See Below
Immunohistochemistry	8-25 µg/mL	See Below
Simple Western	10 µg/mL	See Below

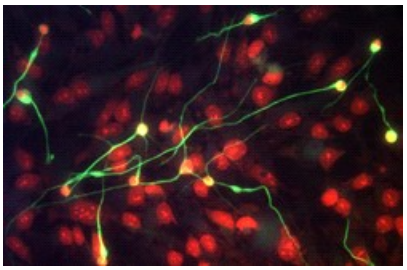
DATA

Western Blot



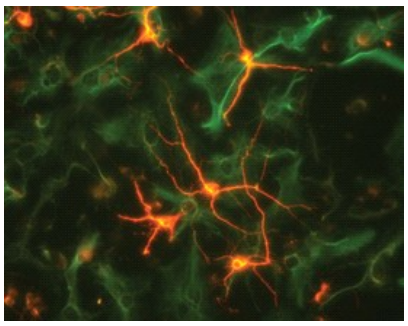
Detection of Human and Mouse β-III Tubulin by Western Blot. Western blot shows lysates of human brain (cerebellum) tissue, human brain (hypothalamus) tissue, mouse brain (cerebellum) tissue, and mouse brain (stem) tissue. PVDF membrane was probed with 0.2 µg/mL of Mouse Anti-Neuron-specific β-III Tubulin Monoclonal Antibody (Catalog # MAB1195) followed by HRP-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # HAF018). A specific band was detected for β-III Tubulin at approximately 55 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.

Immunocytochemistry



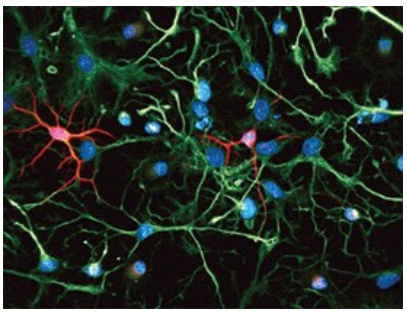
β-III Tubulin in Differentiated Human Neural Progenitor Cells. β-III Tubulin was detected in immersion fixed differentiated human neural progenitor cells using Mouse Anti-Neuron-specific β-III Tubulin Monoclonal Antibody (clone TuJ-1) (Catalog # MAB1195) for 3 hours at room temperature. Cells were stained (green) and counterstained (red). View our protocol for Fluorescent ICC Staining of Cells on Coverslips.

Immunocytochemistry



β-III Tubulin in Rat Cortical Neurons and GFAP in Rat Astrocytes. β-III Tubulin was detected in rat cortical neurons using 5 µg/mL neuron-specific Mouse Anti-Neuron-specific β-III Tubulin Monoclonal Antibody (Catalog # MAB1195). GFAP was detected in rat astrocytes using 10 µg/mL Human GFAP Antigen Affinity-purified Polyclonal Antibody (Catalog # AF2594). Cells were incubated with primary antibodies for 3 hours at room temperature. Cells were stained for beta-III Tubulin using the NorthernLights™ 557-conjugated Anti-Mouse IgG Secondary Antibody (red; Catalog # NL007) and for GFAP using the NorthernLights 493-conjugated Anti-Sheep IgG Secondary Antibody (green; Catalog # NL012). View our protocol for Fluorescent ICC Staining of Cells on Coverslips.

Immunocytochemistry



β-III Tubulin and Nestin in Rat Cortical Stem Cells. β-III Tubulin and Nestin were detected in rat cortical stem cells (Catalog # NSC001) using 5 µg/mL neuron-specific Mouse Anti-Neuron-specific β-III Tubulin Monoclonal Antibody (Catalog # MAB1195) and 10 µg/mL Rat Nestin Antigen Affinity-purified Polyclonal Antibody (Catalog # AF2736). Cells were incubated with primary antibodies for 3 hours at room temperature. Cells were stained for beta-III Tubulin using the NorthernLights™ 557-conjugated Anti-Mouse IgG Secondary Antibody (red; Catalog # NL007) and for Nestin using the NorthernLights 493-conjugated Anti-Goat IgG Secondary Antibody (green; Catalog # NL003). Tissue was counterstained with DAPI (blue). View our protocol for Fluorescent ICC Staining of Cells on Coverslips.

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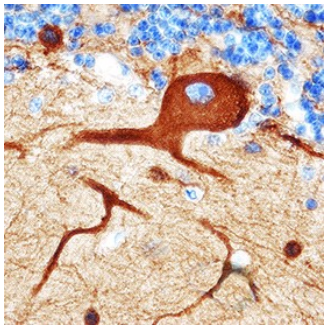
Global bio-techne.com info@bio-techne.com techsupport@bio-techne.com TEL +1 612 379 2956
USA TEL 800 343 7475 Canada TEL 855 668 8722 China TEL +86 (21) 52380373
Europe | Middle East | Africa TEL +44 (0)1235 529449

Neuron-specific β-III Tubulin Antibody

Monoclonal Mouse IgG_{2A} Clone # TuJ-1

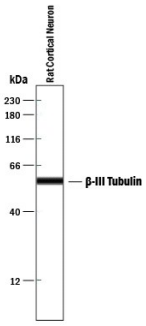
Catalog Number: MAB1195

Immunohistochemistry



β-III Tubulin in Human Brain. β-III Tubulin was detected in immersion fixed paraffin-embedded sections of human brain (cerebellum) using Mouse Anti-Neuron-specific β-III Tubulin Monoclonal Antibody (Catalog # MAB1195) at 8 µg/mL for 1 hour at room temperature followed by incubation with the Anti-Mouse IgG VisUCyte™ HRP Polymer Antibody (Catalog # VC001). Tissue was stained using DAB (brown) and counterstained with hematoxylin (blue). Specific staining was localized to Purkinje neurons. View our protocol for IHC Staining with VisUCyte HRP Polymer Detection Reagents.

Simple Western



Detection of Rat β-III Tubulin by Simple Western™. Simple Western lane view shows lysates of rat cortical neurons, loaded at 0.2 mg/mL. A specific band was detected for β-III Tubulin at approximately 56 kDa (as indicated) using 10 µg/mL of Mouse Anti-Neuron-specific β-III Tubulin Monoclonal Antibody (Catalog # MAB1195). This experiment was conducted under reducing conditions and using the 12-230 kDa separation system.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.5 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

β-III Tubulin, also known as tubulin β-4, is regarded as a neuron-specific marker. The expression of β-III Tubulin has been suggested to be one of the earliest markers to signal commitment in primitive neuroepithelium.

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USA TEL 800 343 7475 Canada TEL 855 668 8722 China TEL +86 (21) 52380373
Europe | Middle East | Africa TEL +44 (0)1235 529449