

## DESCRIPTION

<b>Specificity</b>	Detects mammalian and chicken neuron-specific $\beta$ -III tubulin but not other $\beta$ -tubulin isoforms in Western blots.
<b>Source</b>	Monoclonal Mouse IgG <sub>2A</sub> Clone # TuJ-1
<b>Purification</b>	Protein A or G purified from hybridoma culture supernatant
<b>Immunogen</b>	Rat brain-derived microtubules
<b>Formulation</b>	Lyophilized from a 0.2 $\mu$ m 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 $\mu$ m filtered solution in PBS.

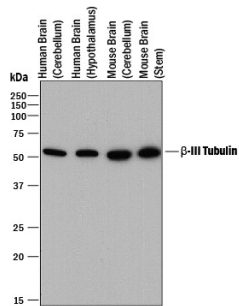
## APPLICATIONS

**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.

	<b>Recommended Concentration</b>	<b>Sample</b>
<b>Western Blot</b>	0.2 $\mu$ g/mL	See Below
<b>Immunocytochemistry</b>	8-25 $\mu$ g/mL	See Below
<b>Simple Western</b>	10 $\mu$ g/mL	See Below

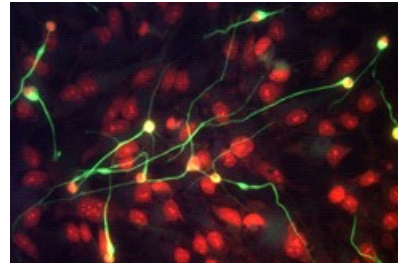
## DATA

### Western Blot



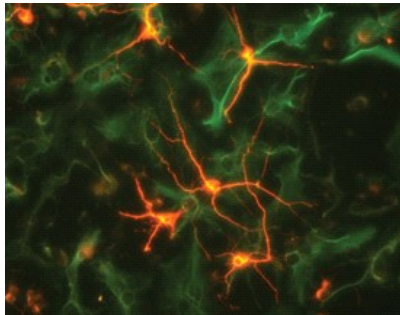
**Detection of Human and Mouse  $\beta$ -III Tubulin by Western Blot.** Western blot shows lysates of human brain (cerebellum) tissue, human brain (hypothalamus) tissue, mouse brain (cerebellum) tissue, and mouse brain (stem) tissue. PVDF membrane was probed with 0.2  $\mu$ g/mL of Mouse Anti-Neuron-specific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

### Immunocytochemistry



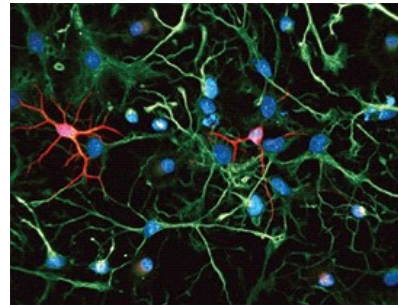
**$\beta$ -III Tubulin in Differentiated Human Neural Progenitor Cells.**  $\beta$ -III Tubulin was detected in immersion fixed differentiated human neural progenitor cells using Mouse Anti-Neuron-specific  $\beta$ -III Tubulin Monoclonal Antibody (clone TuJ-1) (Catalog # MAB1195) for 3 hours at room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

### Immunocytochemistry



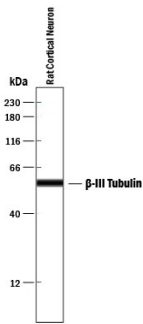
**$\beta$ -III Tubulin in Rat Cortical Neurons and GFAP in Rat Astrocytes.**  $\beta$ -III Tubulin was detected in rat cortical neurons using 5  $\mu$ g/mL neuron-specific Mouse Anti-Neuron-specific  $\beta$ -III Tubulin Monoclonal Antibody (Catalog # MAB1195). GFAP was detected in rat astrocytes using 10  $\mu$ g/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



**$\beta$ -III Tubulin and Nestin in Rat Cortical Stem Cells.**  $\beta$ -III Tubulin and Nestin were detected in rat cortical stem cells (Catalog # NSC001) using 5  $\mu$ g/mL neuron-specific Mouse Anti-Neuron-specific  $\beta$ -III Tubulin Monoclonal Antibody (Catalog # MAB1195) and 10  $\mu$ g/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*.

## Simple Western



**Detection of Rat  $\beta$ -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  $\beta$ -III Tubulin at approximately 56 kDa (as indicated) using 10  $\mu$ g/mL of Mouse Anti-Neuron-specific  $\beta$ -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

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