

Anti-Neuron-specific β -III Tubulin-NL637

Catalog Number: NL1195V

Lot Number: AATN04

100 Tests in 50 μ L staining volume

20 Tests in 250 μ L staining volume

Reagents Provided

NorthernLights™ 637 (NL637)-conjugated mouse monoclonal anti-Neuron-specific β -III Tubulin: Supplied as a 10X solution of antibody in 0.5 mL PBS containing 0.09% sodium azide.

Clone #: TuJ-1

Isotype: mouse IgG_{2A}

Storage

Reagents are stable for **twelve months** from date of receipt when stored in the dark at 2° - 8° C.

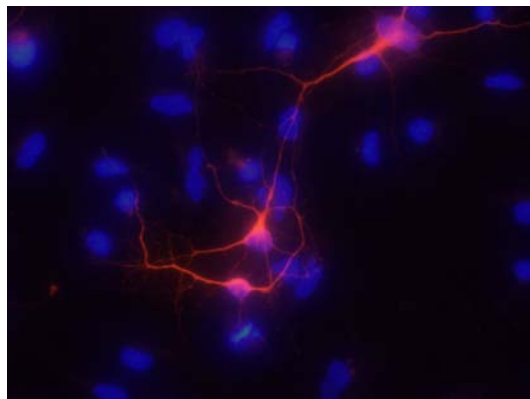
Intended Use

Designed to visualize the expression of Neuron-specific β -III Tubulin by fluorescence microscopy.

Product Description

This antibody was produced from a hybridoma resulting from the fusion of a mouse myeloma with B cells obtained from a mouse immunized with rat brain-derived microtubules.¹ The IgG fraction of the tissue culture supernatant was purified by Protein G affinity chromatography. The purified antibody was then conjugated to fluorochrome NL637. The spectral characteristics of NL637 are provided, along with those of allophycocyanin (APC), Alexa Fluor® 647, and Indocarbocyanine (Cy™5) for comparison.

Fluorochrome	Absorption Maximum (nm)	Emission Maximum (nm)
NL637	637	658
APC	645	660
Alexa Fluor 647	650	668
Cy5	650	670



Neuron-specific β -III Tubulin-NL637

Differentiated rat cortical stem cells were stained with NL637-conjugated anti-Neuron-specific β -III Tubulin (Catalog # NL1195V, orange) and counterstained with DAPI (blue).

FOR RESEARCH USE ONLY. NOT FOR USE IN HUMANS.

NorthernLights is a trademark of R&D Systems, Inc.
 Alexa Fluor is a registered trademark of Invitrogen, Inc.
 Cy is a trademark of GE Healthcare.
 Triton is a registered trademark of Union Carbide Corp.

Background Information

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. This antibody reacts with mammalian and chicken neuron-specific β -III Tubulin but not with other β -tubulin isotypes in glial cells.^{1,2} This antibody stains neuronal cell bodies, dendrites, axons, and axonal terminations³ and is commonly used in the identification of newly committed neurons.

References

1. Caccamo, D. *et al.* (1989) Lab. Invest. **60**:390.
2. Alexander, J.E. *et al.* (1991) Proc. Natl. Acad. Sci. USA **88**:4689.
3. Geisert, E.E. *et al.* (1989) Neurosci. Lett. **102**:137.

Immunocytochemistry Validation

This antibody has been tested for immunocytochemistry using differentiated rat cortical stem cells. Cells were fixed in PBS containing 4% paraformaldehyde, and blocked with PBS containing 10% normal donkey serum, 0.1% Triton® X-100, and 1% BSA. After blocking, cells were incubated with NL637-conjugated antibody at a final concentration of 1X (1:10 dilution) in blocking buffer for 3 hours at room temperature, or overnight at 4° C, in the dark. Between each step, cells were washed with PBS containing BSA. If a staining volume of 250 μ L is used, this kit can be used for 20 tests; 100 tests can be done in a staining volume of 50 μ L.

Warning: Contains sodium azide as a preservative - sodium azide may react with lead and copper plumbing to form explosive metal azides. Flush with large volumes of water during disposal.

R&D Systems Inc.
1-800-343-7475