Technical Data Sheet

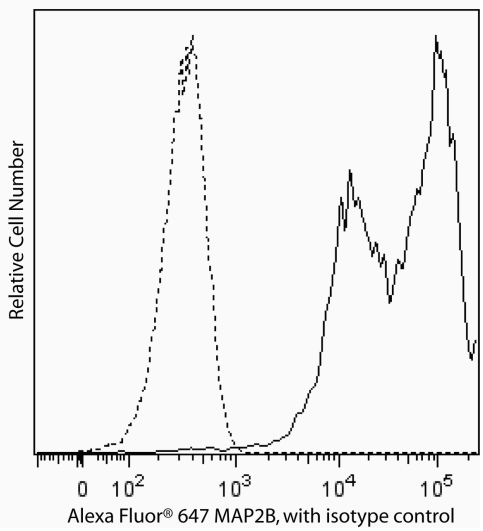
Alexa Fluor® 647 Mouse anti-MAP2B

Product Information

Material Number:	**560382**
Size:	50 tests
Vol. per Test:	20 µl
Clone:	18/MAP2B
Immunogen:	Human MAP2B aa. 19-219 Recombinant Protein
Isotype:	Mouse IgG1, κ
Reactivity:	QC Testing: Human Reported: Mouse
Storage Buffer:	Aqueous buffered solution containing BSA, protein stabilizer, and ≤0.09% sodium azide.

Description

Microtubule-**a**ssociated **p**roteins (MAPs) play a crucial role in the development and morphology of neurons. MAP2, specifically localized in dendrites, has four known isoforms that are produced by alternative splicing of the transcript and are expressed at various stages of neuronal development. MAP2B is a 280-kDa protein that is expressed throughout brain development. It contains functional domains that interact with the regulatory subunit of the cAMP-dependent kinase II and microtubules. Experimental monitoring of its presence, along with GFAP and nestin, may be utilized to quantify neuronal development.



Analysis of MAP2B in H9 cells. *H9 human embryonic stem (ES) cells (WiCell, Madison, WI) were differentiated into Neural Precursor cells (NPCs) and grown for 4 passages before differentiating into neurons and glia for 12 days. The cells were fixed (BD Cytofix™ buffer, Cat. No. 554655) for 20 minutes at room temperature, permeabilized with BD™ Phosflow Perm Buffer I (Cat. No. 557885), and then stained with either Alexa Fluor® 647 Mouse anti-MAP2B (solid line) or Alexa Fluor® 647 Mouse IgG1 κ Isotype Control (Cat. No. 557732, dashed line). This antibody also works in BD™ PhosFlow Perm Buffer II or III (Cat. No. 558052 or 558050, respectively). Flow cytometry was performed on a BD FACSCanto™ II flow cytometry system.*

Preparation and Storage

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.

The antibody was conjugated to Alexa Fluor® 647 under optimum conditions, and unreacted Alexa Fluor® 647 was removed.

Store undiluted at 4°C and protected from prolonged exposure to light. Do not freeze.

Application Notes

Application

Intracellular staining (flow cytometry)	Routinely Tested

BD Biosciences

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Suggested Companion Products

Catalog Number	Name	Size	Clone
554655	Fixation Buffer	100 ml	(none)
557885	Perm/Wash Buffer I	125 ml	(none)
557732	Alexa Fluor® 647 Mouse IgG1 κ Isotype Control	100 tests	MOPC-21
558050	Perm Buffer III	125 ml	(none)
558052	Perm Buffer II	125 ml	(none)

Product Notices

1. This reagent has been pre-diluted for use at the recommended Volume per Test. We typically use 1 × 10^6 cells in a 100-µl experimental sample (a test).
2. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.
3. For fluorochrome spectra and suitable instrument settings, please refer to our Fluorochrome Web Page at www.bdbiosciences.com/colors.
4. Alexa Fluor® 647 fluorochrome emission is collected at the same instrument settings as for allophycocyanin (APC).
5. The Alexa Fluor®, Pacific Blue™, and Cascade Blue® dye antibody conjugates in this product are sold under license from Molecular Probes, Inc. for research use only, excluding use in combination with microarrays, or as analyte specific reagents. The Alexa Fluor® dyes (except for Alexa Fluor® 430), Pacific Blue™ dye, and Cascade Blue® dye are covered by pending and issued patents.
6. Alexa Fluor® is a registered trademark of Molecular Probes, Inc., Eugene, OR.
7. Source of all serum proteins is from USDA inspected abattoirs located in the United States.
8. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.

References

Charlesworth P, Komiyama NH, Grant SGN. Homozygous mutation of focal adhesion kinase in embryonic stem cell derived neurons: normal electrophysiological and morphological properties in vitro. *BMC Neurosci.* 2006; 7:47. (Clone-specific: Immunofluorescence)

Kanaani J, el-Husseini Ael-D, Aguilera-Moreno A, Diacovo JM, Bredt DS, Baekkeskov S. A combination of three distinct trafficking signals mediates axonal targeting and presynaptic clustering of GAD65. *J Cell Biol.* 2002; 158(7):1229-1238. (Clone-specific: Immunofluorescence)

Kindler S, Schulz B, Goedert M, Garner CC. Molecular structure of microtubule-associated protein 2b and 2c from rat brain. *J Biol Chem.* 1990; 265(32):19679-19684. (Biology)