Technical Data Sheet

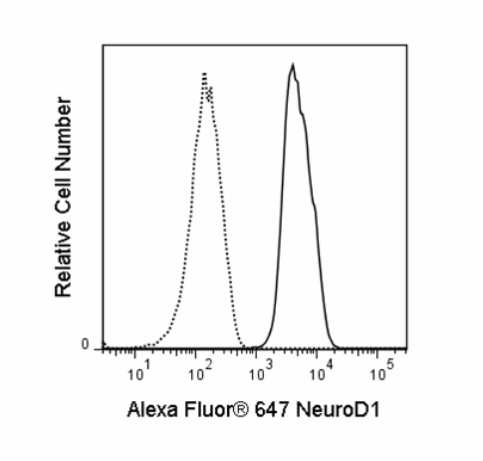
Alexa Fluor® 647 Mouse anti-NeuroD1

Product Information

Material Number:	**563566**
Alternate Name:	Class A basic helix-loop-helix protein 3, bHLHa3, BETA2, NeuroD
Size:	50 tests
Vol. per Test:	5 µl
Clone:	R8-294
Immunogen:	Human NeuroD1 Recombinant Protein
Isotype:	Mouse IgG1, κ
Reactivity:	QC Testing: Human Tested in Development: Mouse
Storage Buffer:	Aqueous buffered solution containing BSA, protein stabilizer, and ≤0.09% sodium azide.

Description

The R8-294 monoclonal antibody specifically binds to Neurogenic differentiation factor 1 (NeuroD1). NeuroD1 is a basic helix-loop-helix (bHLH) transcription factor that is also known as BHLHA3, Beta-cell E-box transactivator 2, BETA2 and NeuroD. NeuroD1 interacts with other bHLH proteins and binds the insulin E-box sequence to regulate pancreatic islet cell development. It also plays a key role in central nervous system (CNS) and sensory nervous system neuron development. Specifically, it is required for the terminal differentiation of neurons during late stages of neurogenesis in the CNS (cerebral cortex, hippocampus, and cerebellum) and the sensory nervous system (eye, inner ear, and olfactory system). During antibody development, the purified R8-294 monoclonal antibody was found to detect NeuroD1 by western blot and indirect immunofluorescent staining followed by flow cytometric analysis or imaging analysis.



Flow cytometric analysis of NeuroD1 expression on human retinoblastoma. *Y79 cells (ATCC, HTB-18™) were fixed with BD Cytofix™ fixation buffer (Cat. No. 554655) and permeabilized with BD Phosflow™ Perm buffer III (Cat. No. 558050). The cells were stained with either Alexa Fluor® 647 Mouse IgG1, κ isotype control (dashed line, Cat. No. 557732) or Alexa Fluor® 647 Mouse anti-NeuroD1 monoclonal antibody at matched concentrations. Flow cytometry was performed on a BD CantoII™ flow cytometry system. We do not recommend BD Phosflow™ Perm/Wash Buffer I for permeabilization.*

Preparation and Storage

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

Application Notes

Application

Intracellular staining (flow cytometry)	Routinely Tested
Bioimaging	Not Recommended
Immunofluorescence	Not Recommended

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Suggested Companion Products

Catalog Number	Name	Size	Clone
554655	Fixation Buffer	100 ml	(none)
558050	Perm Buffer III	125 ml	(none)
554656	Stain Buffer (FBS)	500 ml	(none)
557732	Alexa Fluor® 647 Mouse IgG1 κ Isotype Control	100 tests	MOPC-21
563000	Purified Mouse Anti-NeuroD1	0.1 mg	R8-294

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. Species testing during development may have been performed with a different format of the same clone. Selected applications have been tested for cross-reactivity.
3. Alexa Fluor® 647 fluorochrome emission is collected at the same instrument settings as for allophycocyanin (APC).
4. 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.
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. All other brands are trademarks of their respective owners.
8. Source of all serum proteins is from USDA inspected abattoirs located in the United States.
9. For fluorochrome spectra and suitable instrument settings, please refer to our Multicolor Flow Cytometry web page at www.bdbiosciences.com/colors.
10. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.

References

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