

Technical Data Sheet

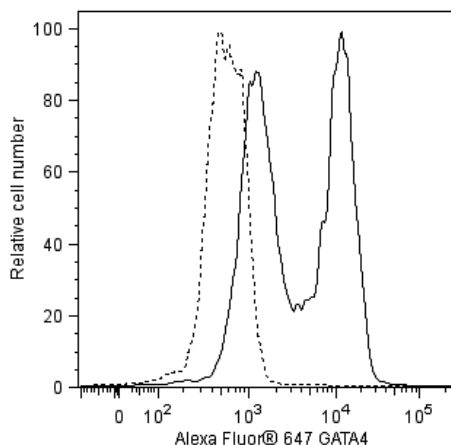
Alexa Fluor® 647 Mouse Anti-GATA4

Product Information

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|-------------------------|--|
| Material Number: | 560400 |
| Alternate Name: | MGC126629, GATA-4 |
| Size: | 50 tests |
| Vol. per Test: | 20 µl |
| Clone: | L97-56 |
| Immunogen: | Human GATA4 Peptide |
| Isotype: | Mouse (BALB/c) IgG1, κ |
| Reactivity: | QC Testing: Mouse Reported Reactivity: Human |
| Storage Buffer: | Aqueous buffered solution containing BSA, protein stabilizer, and ≤0.09% sodium azide. |

Description

The L97-56 monoclonal antibody reacts with GATA4 (GATA-binding protein 4), a member of the GATA family of zinc finger-containing transcription factors that bind to the GATA nucleotide sequence. This ~50-kDa nuclear protein is expressed in mesodermal and definitive endodermal tissues such as the gastrointestinal tract, gonads, and heart. Genetic studies suggest that GATA4 regulates embryonic cardiac development: in mice, disruption of the GATA4 gene leads to defects in heart tube formation, while mutations of GATA4 are associated with atrial septal defects in humans. In the adult heart, GATA4 regulates differentiated gene expression. The roles of GATA4 in endocrine and reproductive functions were recently reviewed.



Analysis of Alexa Fluor® 647 Mouse Anti-GATA4 on mouse testis, embryonal carcinoma. F9 cells were treated with 0.3 µM Retinoic Acid and 1 mM Dibutyryl cAMP for 48 hours (solid line) or were untreated (dashed line). The cells were fixed (BD Cytotfix™ buffer, Cat. No. 554655) for 10 minutes at 37 °C, permeabilized with BD Perm Buffer™ III (Cat. No. 558050) on ice for 30 minutes. The cells were stained with Alexa Fluor® 647 Mouse Anti-GATA4, incubated in the dark for 30 minutes at room temperature. This antibody also works in BD Phosflow™ Perm Buffer I and II. Flow cytometry was performed on a BD FACSCanto™ II flow cytometry system.

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

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| Intracellular staining (flow cytometry) | Routinely Tested |
|---|------------------|

Suggested Companion Products

| Catalog Number | Name | Size | Clone |
|----------------|-----------------|--------|--------|
| 554655 | Fixation Buffer | 100 ml | (none) |
| 558050 | Perm Buffer III | 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. Alexa Fluor® 647 fluorochrome emission is collected at the same instrument settings as for allophycocyanin (APC).

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| 877.232.8995 | 800.979.9408 | 32.53.720.550 | 0120.8555.90 | 65.6861.0633 | 55.11.5185.9995 |

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3. Alexa Fluor® is a registered trademark of Molecular Probes, Inc., Eugene, OR.
4. 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.
5. Source of all serum proteins is from USDA inspected abattoirs located in the United States.
6. 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.
7. For fluorochrome spectra and suitable instrument settings, please refer to our Multicolor Flow Cytometry web page at www.bdbiosciences.com/colors.
8. Please refer to www.bdbiosciences.com/pharming/protocols for technical protocols.

References

Oka T, Xu J, Molkentin JD. Re-employment of developmental transcription factors in adult heart disease. *Semin Cell Dev Biol.* 2007; 18(1):117-131. (Biology)
Viger RS, Guittot SM, Anttonen M, Wilson DB, Heikinheimo M. Role of the GATA family of transcription factors in endocrine development, function, and disease. *Mol Endocrinol.* 2008; 22(4):781-789. (Biology)

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