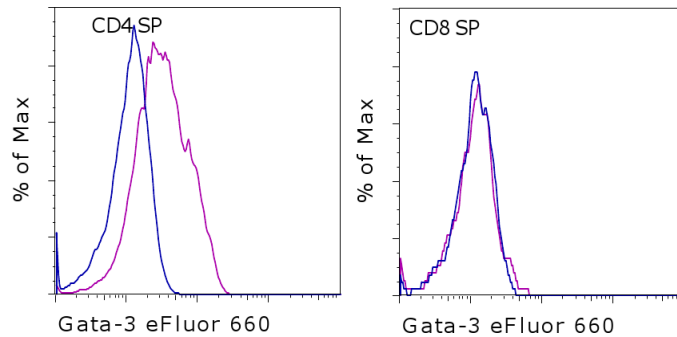


Anti-Human/Mouse Gata-3 eFluor[®] 660 (Alexa Fluor[®] 647 Replacement)

Catalog Number: 50-9966

RUO: For Research Use Only. Not for use in diagnostic procedures.



Intracellular staining of BALB/c thymocytes with Anti-Mouse CD4 PE (cat. 12-0041), Anti-Mouse CD8a FITC (cat. 11-0081), and Rat IgG2b K Isotype Control eFluor[®] 660 (cat. 50-4031) (blue histogram) or Anti-Human/Mouse Gata-3 eFluor[®] 660 (purple histogram) using the Foxp3 Staining Buffers (cat. 00-5523). CD4 single-positive (left) or CD8 single-positive (right) cells were used for analysis.

Product Information

Contents: Anti-Human/Mouse Gata-3 eFluor[®] 660 (Alexa Fluor[®] 647 Replacement)

REF **Catalog Number:** 50-9966

Clone: TWAJ

Concentration: 5 μ L (0.125 μ g)/test

Host/Isotype: Rat IgG2b, kappa

Formulation: aqueous buffer, 0.09% sodium azide, may contain carrier protein/stabilizer

Temperature Limitation: Store at 2-8°C. Do not freeze. Light sensitive material.

Batch Code: Refer to vial

Use By: Refer to vial



Description

The monoclonal antibody TWAJ recognizes mouse and human Gata-3, a member of the Gata family of transcription factors. Gata-3 is a T cell-specific transcription factor important for thymic development and Th2 differentiation. Expression during embryonic development is found in the central nervous system, skin, mammary glands and kidney. During development, the expression of Gata-3 is essential and homozygous knock-out of Gata-3 is embryonic lethal. The Gata-3 is also essential for T cell commitment and survival. In the thymus, expression is found mainly on the CD4 single positive cells. During Th2 differentiation, Gata-3 binds to the IL-4 promoter as well as represses the expression of T-bet, thus inhibiting Th1 differentiation.

Alternative splice variants have been reported especially in the MCF7 cell line. The TWAJ anti-mouse/human Gata-3 antibody will recognize both forms (50 and 45 kDa) of the protein.

Staining with the TWAJ anti-mouse/human Gata-3 antibody requires the use of the Foxp3 Staining Buffer Set.

Applications Reported

This TWAJ antibody has been reported for use in intracellular staining followed by flow cytometric analysis.

Applications Tested

This TWAJ antibody has been pre-titrated and tested by intracellular staining and flow cytometric analysis of mouse thymocytes using the Foxp3 Buffer Set (cat. 00-5523) and protocol. Please see Best Protocols Section (Staining Intracellular Antigens for Flow Cytometry) for staining protocol (refer to Protocol B: One-step protocol for intracellular (nuclear) proteins). This can be used at 5 μ L (0.125 μ g) per test. A test is defined as the amount (μ g) of antibody that will stain a cell sample in a final volume of 100 μ L. Cell number should be determined empirically but can range from 10⁵ to 10⁸ cells/test.

eFluor[®] 660 is a replacement for Alexa Fluor[®] 647. eFluor[®] 660 emits at 659 nm and is excited with the red laser (633 nm). Please make sure that your instrument is capable of detecting this fluorochrome.

Not for further distribution without written consent.

Copyright © 2000-2012 eBioscience, Inc.

Tel: 888.999.1371 or 858.642.2058 • Fax: 858.642.2046 • www.ebioscience.com •
info@ebioscience.com

Anti-Human/Mouse Gata-3 eFluor[®] 660 (Alexa Fluor[®] 647 Replacement)

Catalog Number: 50-9966

RUO: For Research Use Only. Not for use in diagnostic procedures.

References

Winer S, Chan Y, Paltser G, Truong D, Tsui H, Bahrami J, Dorfman R, Wang Y, Zielenski J, Mastronardi F, Maezawa Y, Drucker DJ, Engleman E, Winer D, Dosch HM. Normalization of obesity-associated insulin resistance through immunotherapy. *Nat Med.* 2009 Jul 26. (TWAJ, IC Flow, PubMed)

Guan H, Nagarkatti PS, Nagarkatti M. Role of CD44 in the differentiation of Th1 and Th2 Cells: CD44-deficiency enhances the development of Th2 effectors in response to sheep RBC and chicken ovalbumin. *J Immunol.* 2009 Jul 1;183(1):172-80. (TWAJ, IC flow, PubMed)

Mantel PY, Kuipers H, Boyman O, Rhyner C, Ouaked N, Rückert B, Karagiannidis C, Lambrecht BN, Hendriks RW, Cramer R, Akdis CA, Blaser K, Schmidt-Weber CB. GATA3-driven Th2 responses inhibit TGF-beta1-induced FOXP3 expression and the formation of regulatory T cells. *PLoS Biol.* 2007 Dec;5(12):e329.

Usary J, Llaca V, Karaca G, Presswala S, Karaca M, He X, Langerød A, Kåresen R, Oh DS, Dressler LG, Lønning PE, Strausberg RL, Chanock S, Børresen-Dale AL, Perou CM. Mutation of GATA3 in human breast tumors. *Oncogene.* 2004 Oct 7;23(46):7669-78.

Hernández-Hoyos G, Anderson MK, Wang C, Rothenberg EV, Alberola-Ila J. GATA-3 expression is controlled by TCR signals and regulates CD4/CD8 differentiation. *Immunity.* 2003 Jul;19(1):83-94.

Pai SY, Truitt ML, Ting CN, Leiden JM, Glimcher LH, Ho IC. Critical roles for transcription factor GATA-3 in thymocyte development. *Immunity.* 2003 Dec;19(6):863-75.

Hendriks RW, Nawijn MC, Engel JD, van Doorninck H, Grosveld F, Karis A. Expression of the transcription factor GATA-3 is required for the development of the earliest T cell progenitors and correlates with stages of cellular proliferation in the thymus. *Eur J Immunol.* 1999 Jun;29(6):1912-8.

Related Products

00-5521 Foxp3 Fixation/Permeabilization Concentrate and Diluent

00-5523 Foxp3 / Transcription Factor Staining Buffer Set

11-0081 Anti-Mouse CD8a FITC (53-6.7)

12-0041 Anti-Mouse CD4 PE (GK1.5)

50-4031 Rat IgG2b Isotype Control eFluor[®] 660

Not for further distribution without written consent.

Copyright © 2000-2012 eBioscience, Inc.

Tel: 888.999.1371 or 858.642.2058 • Fax: 858.642.2046 • www.ebioscience.com •
info@ebioscience.com