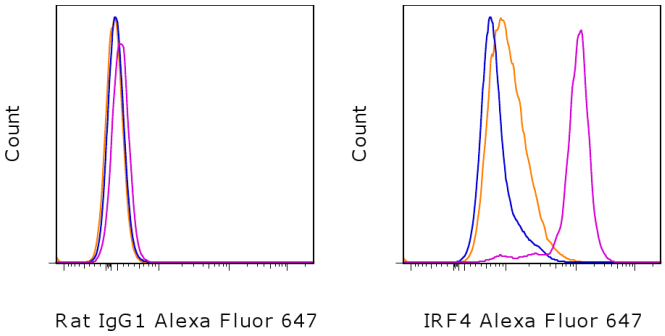
Anti-Human/Mouse IRF4 Alexa Fluor® 647 (To be Discontinued. Refer to Cat. No. 50-9858)

Catalog Number: 51-9858
Also known as: Interferon regulatory factor 4
RUO: For Research Use Only. Not for use in diagnostic procedures.



Sheep red blood cell-immunized C57Bl/6 splenocytes were surface stained, fixed and permeabilized using the Foxp3 Staining Buffer Set (cat. 00-5523), and then stained intracellularly with 0.125 ug of Rat IgG1 K Isotype Control Alexa Fluor® 647 (cat. 51-4301) (left) or 0.125 ug of Anti-Human/Mouse IRF4 Alexa Fluor® 647 (right). Samples were gated on CD4+ Foxp3- (blue histogram), CD4+ Foxp3+ (orange histogram), and CD138+ B220- (purple histogram). Total viable and singlet-gated lymphocytes were used for analysis.

Product Information

Contents: Anti-Human/Mouse IRF4 Alexa Fluor® 647 (To be Discontinued. Refer to Cat. No. 50-9858)
REF **Catalog Number:** 51-9858
Clone: 3E4
Concentration: 0.2 mg/mL
Host/Isotype: Rat IgG1, 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.
LOT **Batch Code:** Refer to vial
Use By: Refer to vial

Description

The monoclonal antibody 3E4 reacts with human and mouse interferon regulatory factor 4 (IRF4). IRF4 is a 52 kDa transcription factor with roles in B cell, T cell and macrophage function. In B cells, IRF4 is highly expressed in mature plasma cells and plays a crucial role in their differentiation. IRF4 has been shown to interact with PU.1 and control the transcription of many B cell-specific genes including *Prdm1*, which encodes Blimp1. In T cells, IRF4 has been implicated in regulatory T (Treg), Th2, Th9 and Th17 cell development and function. This transcription factor is upregulated upon T cell activation and is expressed in mature T cells. Studies have shown that IRF4 directly induces Blimp1 expression in Tregs, leading to IL-10 expression. IRF4 has also been demonstrated to be involved in macrophage polarization and regulation. Lastly, in addition to its roles in normal immune function, IRF4 expression has been reported to be upregulated in many blood-related cancers.

Applications Reported

Anti-Human/Mouse IRF4 Alexa Fluor® 647 has been reported for use in intracellular staining followed by flow cytometric analysis.

Applications Tested

Anti-Human/Mouse IRF4 Alexa Fluor® 647 has been tested by intracellular staining and flow cytometric analysis of mouse splenocytes. This can be used at less than or equal to 0.25 µg per test. A test is defined as the amount (µg) of antibody that will stain a cell sample in a final volume of 100 µL. Cell number should be determined empirically but can range from 10^5 to 10^8 cells/test. It is recommended that the antibody be carefully titrated for optimal performance in the assay of interest.

References

Cretney E, Xin A, Shi W, Minnich M, Masson F, Miasari M, Belz GT, Smyth GK, Busslinger M, Nutt SL, Kallies A. The transcription factors Blimp-1 and IRF4 jointly control the differentiation and function of effector regulatory T cells. Nat Immunol. 2011 Apr;12(4):304-11.

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

Anti-Human/Mouse IRF4 Alexa Fluor® 647 (To be Discontinued. Refer to Cat. No. 50-9858)

Catalog Number: 51-9858
Also known as: Interferon regulatory factor 4
RUO: For Research Use Only. Not for use in diagnostic procedures.

Satoh T, Takeuchi O, Vandenbon A, Yasuda K, Tanaka Y, Kumagai Y, Miyake T, Matsushita K, Okazaki T, Saitoh T, Honma K, Matsuyama T, Yui K, Tsujimura T, Standley DM, Nakanishi K, Nakai K, Akira S. The Jmjd3-Irf4 axis regulates M2 macrophage polarization and host responses against helminth infection. Nat Immunol. 2010 Oct;11(10):936-44.

Staudt V, Bothur E, Klein M, Lingnau K, Reuter S, Grebe N, Gerlitzki B, Hoffmann M, Ulges A, Taube C, Dehzad N, Becker M, Stassen M, Steinborn A, Lohoff M, Schild H, Schmitt E, Bopp T. Interferon-regulatory factor 4 is essential for the developmental program of T helper 9 cells. Immunity. 2010 Aug; 33(2): 192-202.

Shaffer AL, Emre NC, Romesser PB, Staudt LM. IRF4: Immunity. Malignancy! Therapy? Immunity. 2010 Aug 27;33(2):192-202.

Clin Cancer Res. 2009 May 1;15(9):2954-61Zheng Y, Chaudhry A, Kas A, deRoos P, Kim JM, Chu TT, Corcoran L, Treuting P, Klein U, Rudensky AY. Regulatory T-cell suppressor program co-opts transcription factor IRF4 to control T(H)2 responses. Nature. 2009 Mar 19;458(7236):351-6. (**3E4**, IC Flow)

Falini B, Fizzotti M, Pucciarini A, Bigerna B, Marafioti T, Gambacorta M, Pacini R, Alunni C, Natali-Tanci L, Ugolini B, Sebastiani C, Cattoretti G, Pileri S, Dalla-Favera R, Stein H. A monoclonal antibody (MUM1p) detects expression of the MUM1/IRF4 protein in a subset of germinal center B cells, plasma cells, and activated T cells. Blood. 2000 Mar 15;95(6):2084-92.

Related Products

51-4301 Rat IgG1 K Isotype Control Alexa Fluor® 647 (To Be Discontinued. Refer to Cat. No. 50-4301)

Legal