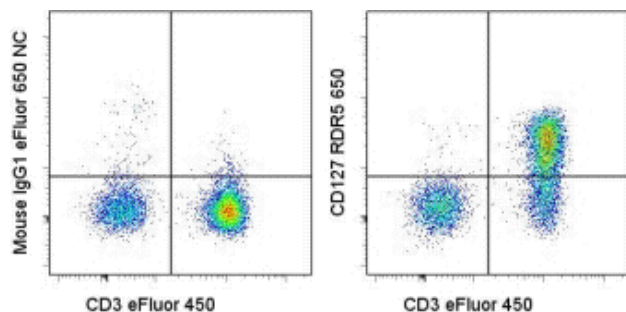


Anti-Human CD127 eFluor® 650NC

Catalog Number: 95-1278

Also Known As: Interleukin-7 Receptor alpha, IL-7Ra

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



Staining of normal human peripheral blood cells with Anti-Human CD3 eFluor® 450 (cat. 48-0037) and Mouse IgG1 K Isotype Control eFluor® 650NC (cat. 95-4714) (left) or Anti-Human CD127 eFluor® 650NC. Cells in the lymphocyte gate were used for analysis.

Product Information

Contents: Anti-Human CD127 eFluor® 650NC

REF **Catalog Number:** 95-1278

Clone: eBioRDR5

Concentration: 5 µL

Host/Isotype: Mouse IgG1

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

Temperature Limitation: Store at 2-8°C. Light sensitive material. This product is guaranteed for 6 months upon receipt when stored properly.

LOT **Batch Code:** Refer to Vial

Use By: Refer to Vial

Caution, contains Azide

Description

The eBioRDR5 monoclonal antibody reacts with human CD127 (Interleukin-7 Receptor α). CD127 complexes with CD132, also known as the common γ chain (γ_c), to form the multi-functional IL-7 receptor (IL-7R). CD127 is a type I glycoprotein with a molecular weight of 75-80 kDa and is expressed by immature B cells through the early pre-B stage, by thymocytes during several stages of their development, and on most mature T cells, with transient down-regulation upon activation. Binding of IL-7 results in signal transduction which occurs through several tyrosine kinase pathways including the Jak/STAT pathway. IL-7 is indispensable for the development of lymphocytes, and the control of homeostatic proliferation of T-cells in the periphery. In addition, IL-7R signaling is known to be involved in the regulation of T cell receptor (TCR) locus rearrangement in $\gamma\delta$ T cells.

Interestingly, recently it has been demonstrated that CD127 expression is down-regulated on CD4+CD25+ regulatory T cells (T regs). While the co-expression of CD4 and CD25 has become widely used as an indicator of T regs, this method of identification may also include cells without suppressive activity. It has clearly been shown that CD4+CD25+ cells that have down-regulated the expression of CD127 are significantly more highly-enriched for the regulatory T population, as defined by expression of the T reg-specific transcription factor Foxp3 and the suppressive activity of these cells, *in vitro*.

Binding of the eBioRDR5 monoclonal antibody to PBMCs is blocked by pre-incubation of the cells with recombinant human IL-7 (cat. 14-8079).

Applications Reported

This eBioRDR5 antibody has been reported for use in flow cytometric analysis.

Applications Tested

This eBioRDR5 antibody has been pre-titrated and tested by flow cytometric analysis of normal human peripheral blood cells. This can be used at 5 µL 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.

The isotype control eFluor® 650NC mouse IgG1 (cat. 95-4714) should be used at 2.5 µL/test.

Laser/Filter Recommendation: When using eFluor 650NC, we recommend excitation with the 405nm violet laser with an appropriate filter set, such as the 630 LP dichroic mirror with the 660/40 bandpass filter. The eFluor 650NC can be minimally excited off of the 633 nm laser, and because its peak emission is 650nm, it will require some compensation out of the APC detector.

Fixation Recommendation: When fixing samples that have been stained with nanocrystal reagents, we recommend keeping the total volume at

approximately 200 uL. (100 uL cells + 100 uL IC Fixation Buffer (cat. 00-8222)) and the exposure time at 30-60 minutes to preserve the optimal fluorescent signal from the nanocrystal reagent.

For answers about fixation and other questions, please refer to Nanocrystal Frequently Asked Questions or contact eBioscience Technical Support.

References

Lim HW, Kim CH. Loss of IL-7 receptor alpha on CD4+ T cells defines terminally differentiated B cell-helping effector T cells in a B cell-rich lymphoid tissue. *J Immunol.* 2007 Dec 1;179(11):7448-56. (eBioRDR5, FC, IHC frozen, PubMed).

Demirkiran A, Bosma BM, Kok A, Baan CC, Metselaar HJ, Ijzermans JN, Tilanus HW, Kwekkeboom J, van der Laan LJ. Allosuppressive donor CD4+CD25+ regulatory T cells detach from the graft and circulate in recipients after liver transplantation. *J Immunol.* 2007 May 15;178(10):6066-72. (eBioRDR5, FC, PubMed)

Liu W, Putnam AL, Xu-Yu Z, Szot GL, Lee MR, Zhu S, Gottlieb PA, Kapranov P, Gingeras TR, de St Groth BF, Clayberger C, Soper DM, Ziegler SF, Bluestone JA. CD127 expression inversely correlates with FoxP3 and suppressive function of human CD4+ T reg cells. *J Exp Med.* 2006 Jul 10;203(7):1701-11.

Seddiki N, Santner-Nanan B, Martinson J, Zaunders J, Sasson S, Landay A, Solomon M, Selby W, Alexander SI, Nanan R, Kelleher A, Fazekas de St Groth B. Expression of interleukin (IL)-2 and IL-7 receptors discriminates between human regulatory and activated T cells. *J Exp Med.* 2006 Jul 10;203(7):1693-700.

Corcoran AE, Smart FM, Cowling RJ, Crompton T, Owen MJ, Venkitaraman AR. The interleukin-7 receptor alpha chain transmits distinct signals for proliferation and differentiation during B lymphopoiesis. *EMBO J.* 1996 Apr 15;15(8):1924-32.

Goodwin RG, Friend D, Ziegler SF, Jerzy R, Falk BA, Gimpel S, Cosman D, Dower SK, March CJ, Namen AE, et al. Cloning of the human and murine interleukin-7 receptors: demonstration of a soluble form and homology to a new receptor superfamily. *Cell.* 1990 Mar 23;60(6):941-51

Related Products

00-4222 Flow Cytometry Staining Buffer

14-8079 Human IL-7 Recombinant Protein

48-0037 Anti-Human CD3 eFluor® 450 (OKT3)

95-4714 Mouse IgG1 K Isotype Control eFluor® 650NC (P3.6.2.8.1)

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