Technical Data Sheet

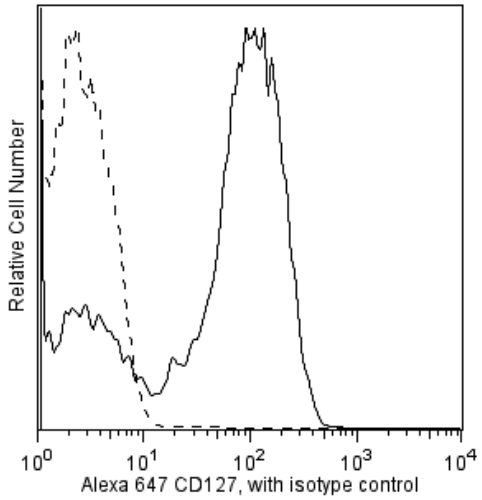
Alexa Fluor® 647 Mouse Anti-Human CD127

Product Information

Material Number:	**560905**
Alternate Name:	IL-7R; IL7R; IL7RA; IL-7Rα; IL-7R-alpha; Interleukin-7 Receptor alpha
Size:	25 tests
Vol. per Test:	20 µl
Clone:	HIL-7R-M21
Immunogen:	Human IL-7R Recombinant Protein
Isotype:	Mouse IgG1, κ
Reactivity:	QC Testing: Human
Storage Buffer:	Aqueous buffered solution containing BSA and ≤0.09% sodium azide.

Description

Monoclonal antibody hIL-7R-M21 reacts with the 60-90 kDa glycoprotein, CD127. CD127 is also known as the IL-7 receptor alpha (IL-7Rα) subunit. The IL-7 receptor complex is a heterodimer composed of CD127 and the common gamma chain (γc, CD132), shared by other cytokine receptors (IL-2R, IL-4R, IL-9R, IL-15R, and IL-21R). CD127 is expressed on thymocytes, T- and B-cell progenitors, mature T cells, and some lymphoid and myeloid cells. In vitro experiments show the expression of CD127 is down-regulated following T cell activation. Studies indicate that the IL-7 Receptor plays an important role in the proliferation and differentiation of mature T cells. Recently, it has been shown that low surface expression of CD127, in combination with intermediate to high surface expression of CD25, the α chain of the IL-2 receptor complex, can distinguish between human regulatory and conventional CD4+ T cells in human adult and cord blood, lymph nodes and thymus.



Profile of CD127 (hIL-7R-M21) expression on peripheral blood lymphocytes. *Human blood cells were stained with Alexa Fluor® 647-anti CD127 (solid line) or Alexa Fluor® 647 mouse IgG1 isotype control (dashed line). Erythrocytes were lysed using BD PharmLyse™ lysis buffer (Cat. No. 555899). Flow cytometry was performed on a BD FACSCalibur™ 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

Flow cytometry	Routinely Tested

Suggested Companion Products

Catalog Number	Name	Size	Clone
557714	Alexa Fluor® 647 Mouse IgG1 κ Isotype Control	100 tests	MOPC-21
555899	Lysing Buffer	100 ml	(none)

BD Biosciences

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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® is a registered trademark of Molecular Probes, Inc., Eugene, OR.
3. Alexa Fluor® 647 fluorochrome emission is collected at the same instrument settings as for allophycocyanin (APC).
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. This product may be covered by US Patent No. 5,543,320.
6. Source of all serum proteins is from USDA inspected abattoirs located in the United States.
7. 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.
8. For fluorochrome spectra and suitable instrument settings, please refer to our Fluorochrome Web Page at www.bdbiosciences.com/colors.
9. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.

References

Goodwin RG, Friend D, Ziegler SF 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; 60(6):941-951. (Biology)

Hardy RR, Carmack CE, Shinton SA, Kemp JD, Hayakawa K. Resolution and characterization of pro-B and pre-pro-B cell stages in normal mouse bone marrow. *J Exp Med.* 1991; 173(5):1213-1225. (Biology)

Liu W, Putnam AL, Xu-Yu Z, Szot GL et al. CD127 expression inversely correlates with FoxP3 and suppressive function of human CD4+ T reg cells. *J Exp Med.* 2006; 203(7):1701-1711. (Biology)

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Plum J, De Smedt M, Leclercq G, Verhasselt B, Vandekerckhove B. Interleukin-7 is a critical growth factor in early human T-cell development. *Blood.* 1996; 88(11):4239-4245. (Biology)

Seddiki N, Santner-Nanan B, Martinson J et al. Expression of interleukin (IL)-2 and IL-7 receptors discriminates between human regulatory and activated T cells. *J Exp Med.* 2006; 203(7):1693-1700. (Biology)