

# CD127 Monoclonal Antibody (eBioRDR5), PE, eBioscience™

Product Details	
Size	100 Tests
Species Reactivity	Human
Published Species	Human
Host/Isotype	Mouse / IgG1, kappa
Recommended Isotype Control	Mouse IgG1 kappa Isotype Control (P3.6.2.8.1), PE, eBioscience™
Class	Monoclonal
Type	Antibody
Clone	eBioRDR5
Conjugate	PE
Form	Liquid
Concentration	5 µL/Test
Purification	Affinity chromatography
Storage buffer	PBS, pH 7.2, with 0.1% gelatin, 0.2% BSA
Contains	0.09% sodium azide
Storage conditions	4° C, store in dark, DO NOT FREEZE!
RRID	AB_10717663

Applications	Tested Dilution	Publications
Immunohistochemistry (Frozen) (IHC (F))	-	1 Publication
Flow Cytometry (Flow)	5 µL (0.06 µg)/test	18 Publications

## Product Specific Information

Description: The eBioRDR5 monoclonal antibody reacts with human CD127 (Interleukin-7 Receptor alpha). CD127 complexes with CD132, also known as the common gamma chain (gamma 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).

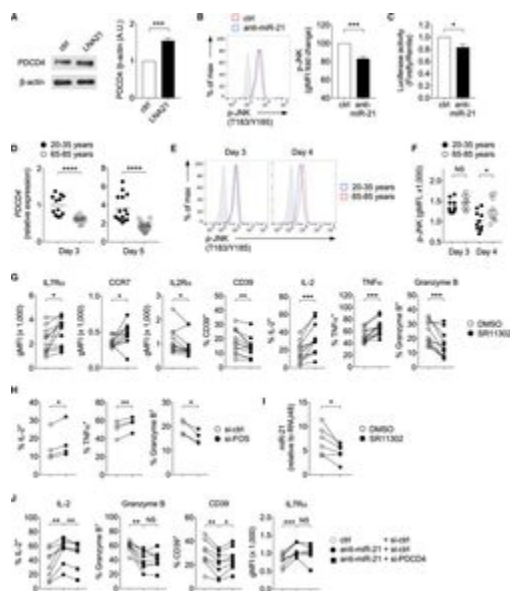
Applications Reported: This eBioRDR5 antibody has been reported for use in flow cytometric analysis.

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  $\mu$ L (0.06  $\mu$ g) per test. A test is defined as the amount ( $\mu$ g) of antibody that will stain a cell sample in a final volume of 100  $\mu$ L. Cell number should be determined empirically but can range from  $10^5$  to  $10^8$  cells/test.

Excitation: 488-561 nm; Emission: 578 nm; Laser: Blue Laser, Green Laser, Yellow-Green Laser.

Filtration: 0.2  $\mu$ m post-manufacturing filtered.

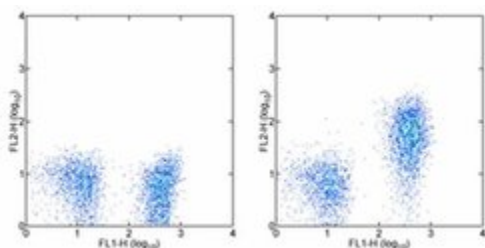
## Advanced Verification Data



### CD127 Antibody (12-1278-42)

Figure 4. miR-21 Promotes Effector Cell Differentiation through AP-1 Activation (A) Naive CD4 + T cells were transfected with either scrambled control or miR-21-blocking locked nucleic acid (LNA21). After 48 hr, PDCD4 and b-actin expression were assessed by western blot. Representative blots and mean normalized intensities from four experiments are shown (mean  $\pm$  SEM, two-tailed paired t test). (B) Naive CD4 + T cells were activated with anti-CD3 and anti-CD28 beads and transduced with a lentiviral vector expressing scrambled control or anti-miR-21. The representative histogram shows phosphorylated JNK in GFP + cells on day 3. The filled gray histogram represents unstimulated naive CD4 + T cells. Results from 7 experiments are expressed relative to the geometric mean fluorescence intensity (MFI) of controls (mean  $\pm$  SEM, two-tailed paired t test). (C) Naive CD4 + T cells were activated and transduced as described in (B) and co-transfected with the AP-1 luciferase reporter plasmid and the Renilla luciferase control construct. On day 3, the activity of AP-1 firefly luciferase was measured and normalized to that of Renilla luciferase (n = 4, mean  $\pm$  SEM, two-tailed paired t test). (D-F) Naive CD4 + T cells isolated from 20- to 35-year-old and 65- to 85-year-old individuals were activated with beads coated with anti-CD3 and anti-CD28 antibodies. (D) PDCD4 expression was quantified by RT-PCR on day 3 and day 5. Results are normalized to ACTB and presented relative to those of cell Cell treatment validation info.

## Product Images For CD127 Monoclonal Antibody (eBioRDR5), PE, eBioscience™



### CD127 Antibody (12-1278-42) in Flow

Staining of normal human peripheral blood cells with Anti-Human CD3 APC (Product # 17-0038-42) and Mouse IgG1 K Isotype Control PE (Product # 12-4714-81) (left) or Anti-Human CD127 PE (right). Cells in the lymphocyte gate were used for analysis.

View more figures on [thermofisher.com](http://thermofisher.com)

## 19 References

### Immunohistochemistry (Frozen) (1)

Journal of immunology (Baltimore, Md. : 1950)

#### 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.

Authors: Lim HW, Kim CH

**Species**  
Not Applicable

**Dilution**  
Not Cited

**Year**  
2007

### Flow Cytometry (18)

Frontiers in immunology

#### Staphylococcus aureus PSM Peptides Modulate Human Monocyte-Derived Dendritic Cells to Prime Regulatory T Cells.

"12-1278 was used in Flow cytometry/Cell sorting to study the effect of PSM3 on the maturation, cytokine production, antigen uptake, and T cell stimulatory capacity of human monocyte-derived DCs treated simultaneously with either LPS (TLR4 ligand) or Sa cell lysate (TLR2 ligand)."

Authors: Richardson JR, Armbruster NS, Günter M, Henes J, Autenrieth SE

**Species**  
Human

**Dilution**  
Not Cited

**Year**  
2019

Cell reports

#### Activation of miR-21-Regulated Pathways in Immune Aging Selects against Signatures Characteristic of Memory T Cells.

"Published figure using CD127 monoclonal antibody (Product # 12-1278-42) in Flow Cytometry"

Authors: Kim C, Hu B, Jadhav RR, Jin J, Zhang H, Cavanagh MM, Akondy RS, Ahmed R, Weyand CM, Goronzy JJ

**Species**  
Not Applicable

**Dilution**  
Not Cited

**Year**  
2018

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### More applications with references on thermofisher.com

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