Technical Data Sheet

PE-CF594 Rat Anti-Mouse CD127

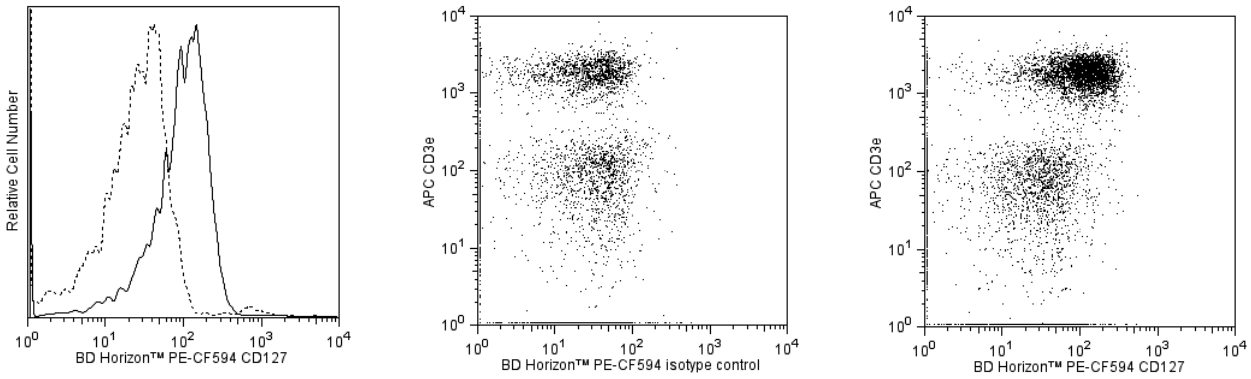
Product Information

Material Number:	**562419**
Alternate Name:	Interleukin-7 receptor alpha chain; IL-7R alpha; IL-7RA; IL-7Rα; Il7r
Size:	50 µg
Concentration:	0.2 mg/ml
Clone:	SB/199
Immunogen:	BALB/c mouse pre-B cell line 1A9
Isotype:	Rat IgG2b, κ
Reactivity:	QC Testing: Mouse
Storage Buffer:	Aqueous buffered solution containing BSA and ≤0.09% sodium azide.

Description

The SB/199 monoclonal antibody specifically binds to mouse CD127, the 65-75 kDa type-I transmembrane protein IL-7Rα. The high affinity IL-7 receptor complex is composed of at least two transmembrane proteins, IL-7Rα and CD132, the common γ chain. CD127 has some sequence homology to the cytokine receptor superfamily (also known as the hematopoietin receptor superfamily). Mice lacking CD127 display profoundly impaired development of the B and T lymphoid cell lineages, but display no obvious non-lymphoid abnormalities. IL-7Rα is expressed on common lymphoid progenitors and early stages of B lineage development in the bone marrow, on the earliest thymocyte progenitors, on CD4-CD8- double-negative and CD4+ and CD8+ single-positive thymocytes, and on most peripheral T lymphocytes. Intestinal intraepithelial lymphocytes with low-density γδ TCR upregulate CD127 expression in response to IL-2, which may be secreted by neighboring αβ TCR-bearing T cells.

This antibody is conjugated to BD Horizon™ PE-CF594, which has been developed exclusively by BD Biosciences as a better alternative to PE-Texas Red®. PE-CF594 excites and emits at similar wavelengths to PE-Texas Red® yet exhibits improved brightness and spectral characteristics. Due to PE having maximal absorption peaks at 496 nm and 564 nm, PE-CF594 can be excited by the blue (488-nm), green (532-nm) and yellow-green (561-nm) lasers and can be detected with the same filter set as PE-Texas Red® (eg 610/20-nm filter).



Multicolor flow cytometric analysis of CD127 expression on BALB/c mouse splenocytes.

Left Panel: *Splenocytes from BALB/c mice were stained with APC Hamster Anti-Mouse CD3e antibody (Cat. No. 561826/553066) and either BD Horizon™ PE-CF594 Rat IgG2b, κ Isotype Control (Cat. No. 562308, dashed line histogram) or with the BD Horizon™ PE-CF594 Rat Anti-Mouse CD127 antibody (Cat. No. 562419, solid line histogram). Histograms (Left Panel) were derived from CD3e-positive gated events with the light scattering characteristics of viable lymphocytes.*

Middle and Right Panels: *Splenocytes from BALB/c mice were stained with APC Hamster Anti-Mouse CD3e antibody and with either a BD Horizon™ PE-CF594 Rat IgG2b, κ isotype control (Middle Panel) or the BD Horizon™ PE-CF594 Rat Anti-Mouse CD127 antibody (Right Panel). Dot plots were derived from gated events based on light scattering characteristics for viable lymphocytes. Flow cytometry was performed using a BD™ LSR II 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 with BD Horizon™ PE-CF594 under optimum conditions, and unconjugated antibody and free PE-CF594 were removed.

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Application Notes

Application

Flow cytometry	Routinely Tested

Suggested Companion Products

Catalog Number	Name	Size	Clone
562308	PE-CF594 Rat IgG2b, κ Isotype Control	0.1 mg	A95-1
554656	Stain Buffer (FBS)	500 ml	(none)
561826	APC Hamster Anti-Mouse CD3e	25 µg	145-2C11
553066	APC Hamster Anti-Mouse CD3e	0.1 mg	145-2C11

Product Notices

1. An isotype control should be used at the same concentration as the antibody of interest.
2. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
3. Source of all serum proteins is from USDA inspected abattoirs located in the United States.
4. Please observe the following precautions: Absorption of visible light can significantly alter the energy transfer occurring in any tandem fluorochrome conjugate; therefore, we recommend that special precautions be taken (such as wrapping vials, tubes, or racks in aluminum foil) to prevent exposure of conjugated reagents, including cells stained with those reagents, to room illumination.
5. 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.
6. For fluorochrome spectra and suitable instrument settings, please refer to our Multicolor Flow Cytometry web page at www.bdbiosciences.com/colors.
7. Texas Red is a registered trademark of Molecular Probes, Inc., Eugene, OR.
8. CF™ is a trademark of Biotium, Inc.
9. When excited by the yellow-green (561-nm) laser, the fluorescence may be brighter than when excited by the blue (488-nm) laser.
10. This product is provided under an Agreement between BIOTIUM and BD Biosciences. The manufacture, use, sale, offer for sale, or import of this product is subject to one or more patents or pending applications owned or licensed by Biotium, Inc. This product, and only in the amount purchased by buyer, may be used solely for buyer's own internal research, in a manner consistent with the accompanying product literature. No other right to use, sell or otherwise transfer (a) this product, or (b) its components is hereby granted expressly, by implication or by estoppel. This product is for research use only. Diagnostic uses require a separate license from Biotium, Inc. For information on purchasing a license to this product including for purposes other than research, contact Biotium, Inc., 3159 Corporate Place, Hayward, CA 94545, Tel: (510) 265-1027. Fax: (510) 265-1352. Email: btinfo@biotium.com.
11. Because of the broad absorption spectrum of the tandem fluorochrome, extra care must be taken when using multi-laser cytometers, which may directly excite both PE and CF™594.
12. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.

References

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