Technical Data Sheet

PE-CF594 Rat Anti-Mouse CD147

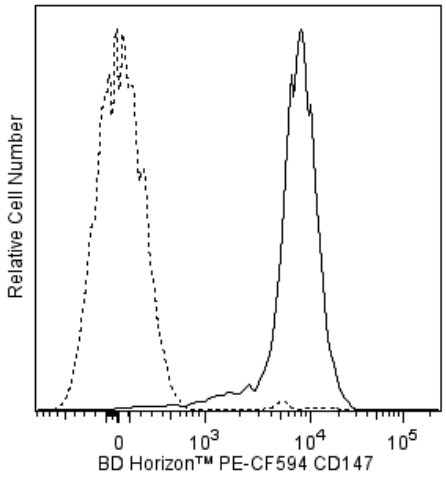
Product Information

Material Number:	**562836**
Alternate Name:	Bsg; Basigin; BASI; EMMPRIN; gp 42; HT7; HT-7; Neurothelin
Size:	50 µg
Concentration:	0.2 mg/ml
Clone:	RL73 (also known as RL73.2)
Immunogen:	Mouse EL4 Cell Subline
Isotype:	Rat (OFA) IgG2a, κ
Reactivity:	QC Testing: Mouse
Storage Buffer:	Aqueous buffered solution containing BSA and ≤0.09% sodium azide.

Description

The RL73 monoclonal antibody specifically binds to mouse CD147. CD147 is type I membrane glycoprotein and member of the Ig superfamily. CD147 is also known as extracellular matrix metalloproteinase inducer (EMMPRIN) and gp42/basigin (BSG). The CD147 molecule is widely expressed on a variety of hemopoietic and non-hemopoietic cell types including thymocytes, lymphocytes, monocytes, granulocytes, erythroblasts and erythrocytes, endothelial cells and neoplasms. CD147 reportedly plays significant roles in the reproductive, nervous and immune systems and in tumor progression. In the immune system, CD147 can function as an adhesion molecule and signaling receptor that regulates leukocyte trafficking and immune and inflammatory responses.

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).



Flow cytometric analysis of CD147 expression on mouse thymocytes. *BALB/c mouse thymocytes were preincubated with Purified Rat Anti-Mouse CD16/CD32 antibody (Mouse BD Fc Block™) (Cat. No. 553141/553142). The cells were then stained with either BD Horizon™ PE-CF594 Rat IgG2a, κ Isotype Control (Cat. No. 562302; dashed line histogram) or BD Horizon™ PE-CF594 Rat Anti-Mouse CD147 antibody (Cat. No. 562836; solid line histogram). The fluorescence histograms were derived from gated events with the forward and side light-scatter characteristics of viable thymocytes. Flow cytometric analysis was performed using a BD™ LSR II Flow Cytometer 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.

Application Notes

Application

Flow cytometry	Routinely Tested

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Suggested Companion Products

Catalog Number	Name	Size	Clone
554656	Stain Buffer (FBS)	500 ml	(none)
562302	PE-CF594 Rat IgG2a, κ Isotype Control	0.1 mg	R35-95
553141	Purified Rat Anti-Mouse CD16/CD32 (Mouse BD Fc Block™)	0.1 mg	2.4G2
553142	Purified Rat Anti-Mouse CD16/CD32 (Mouse BD Fc Block™)	0.5 mg	2.4G2

Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. Source of all serum proteins is from USDA inspected abattoirs located in the United States.
3. An isotype control should be used at the same concentration as the antibody of interest.
4. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.
5. 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.
6. 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.
7. For fluorochrome spectra and suitable instrument settings, please refer to our Multicolor Flow Cytometry web page at www.bdbiosciences.com/colors.
8. Texas Red is a registered trademark of Molecular Probes, Inc., Eugene, OR.
9. CF™ is a trademark of Biotium, Inc.
10. When excited by the yellow-green (561-nm) laser, the fluorescence may be brighter than when excited by the blue (488-nm) laser.
11. 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.
12. 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.

References

Arora K, Gwinn WM, Bower MA, Watson A, Okwumabua I, MacDonald HR, Bukrinsky MI, Constant SL. Extracellular cyclophilins contribute to the regulation of inflammatory responses. *J Immunol.* 175(1):517-522. (Clone-specific: Flow cytometry, Inhibition, In vivo exacerbation)

Coste I, Gauchat JF, Wilson A, Izui S, Jeannin P, Delneste Y, MacDonald HR, Bonnefoy JY, Renno T. Unavailability of CD147 leads to selective erythrocyte trapping in the spleen. *Blood.* 2001; 97(12):3984-3988. (Clone-specific: Blocking, In vivo exacerbation)

MacDonald HR, Lees RK, Bron C. Cell surface glycoproteins involved in the stimulation of interleukin 1-dependent interleukin 2 production by a subline of EL4 thymoma cells. I. Functional characterization by monoclonal antibodies. *J Immunol.* 1985; 135(6):3944-3950. (Immunogen: Activation, Blocking, Radioimmunoassay)

Renno T, Wilson A, Dunkel C, et al. A role for CD147 in thymic development. *J Immunol.* 2002; 168(10):4946-4950. (Clone-specific: Flow cytometry, Fluorescence activated cell sorting, Inhibition)

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