Technical Data Sheet

PE-CF594 Mouse Anti-Human CD27

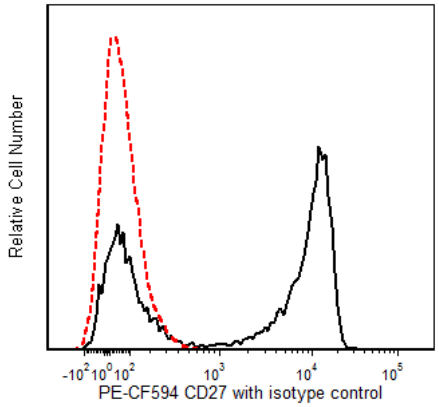
Product Information

Material Number:	**562297**
Alternate Name:	TNFRSF7; TNF receptor superfamily, member 7; T14; Tp55; S152
Entrez Gene ID:	939
Size:	100 tests
Vol. per Test:	5 µl
Clone:	M-T271
Immunogen:	Human T-CLL cells
Isotype:	Mouse (BALB/c) IgG1, κ
Reactivity:	QC Testing: Human
Workshop:	V 5T CD27.03
Storage Buffer:	Aqueous buffered solution containing BSA and ≤0.09% sodium azide.

Description

The M-T271 monoclonal antibody specifically binds to CD27. CD27 presents as a type I transmembrane, disulphide-linked 110 kDa homodimer comprised of two polypeptide chains. The CD27 molecule is a lymphocyte-specific member of the TNF/NGF-R family, and is expressed on a subset of human thymocytes and on the majority of mature T lymphocytes, activated B cells and NK cells. CD27 is highly induced on T cells after TCR stimulation. CD27 binds to CD70 (also known as, CD27 ligand or CD27L) and may be involved in cellular interaction of T and B lymphocytes.

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 CD27 expression on human peripheral blood lymphocytes. Human whole blood was stained with the BD Horizon™ PE-CF594 Mouse Anti-Human CD27 antibody (Cat. No. 562297/562324; solid line histogram) or with a BD Horizon™ PE-CF594 Mouse IgG1, κ Isotype Control (Cat. No. 562292; dashed line histogram). The erythrocytes were lysed with BD Pharm Lyse™ Lysing Buffer (Cat. No. 555899). The fluorescence histograms were derived from events with the forward and side light-scatter characteristics of viable lymphocytes. Flow cytometry 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 antibody was conjugated with BD Horizon™ PE-CF594 under optimum conditions, and unconjugated antibody and free PE-CF594 were removed.
The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.

Application Notes

Application

Flow cytometry	Routinely Tested

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Suggested Companion Products

Catalog Number	Name	Size	Clone
562292	PE-CF594 Mouse IgG1, κ Isotype Control	0.1 mg	X40
554656	Stain Buffer (FBS)	500 ml	(none)
555899	Lysing Buffer	100 ml	(none)

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. When excited by the yellow-green (561-nm) laser, the fluorescence may be brighter than when excited by the blue (488-nm) laser.
3. 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.
4. An isotype control should be used at the same concentration as the antibody of interest.
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. For fluorochrome spectra and suitable instrument settings, please refer to our Fluorochrome Web Page at www.bdbiosciences.com/colors.
7. CF™ is a trademark of Biotium, Inc.
8. 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.
9. Source of all serum proteins is from USDA inspected abattoirs located in the United States.
10. 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.
11. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.

References

Bigler RD, Bushkin Y, Chiorazzi N. S152 (CD27). A modulating disulfide-linked T cell activation antigen. *J Immunol.* 1988; 141(1):21-28. (Biology)

Bigler RD, Donat TL, Boselli CM. Definition of three epitopes of the CD27 molecule [P 120->55] present on activated normal lymphocytes. In: Knapp W, Dorken B, Rieber EP, et al, ed. *Leukocyte Typing IV: White Cell Differentiation Antigens.* New York: Oxford University Press; 1989:351-352. (Clone-specific)

Schlossman S, Boumell L, et al, ed. *Leucocyte Typing V.* New York: Oxford University Press; 1995. (Biology)

Watts TH. TNF/TNFR family members in costimulation of T cell responses. *Annu Rev Immunol.* 2005; 23:23-68. (Biology)

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