Technical Data Sheet

BV605 Mouse Anti-Human CD27

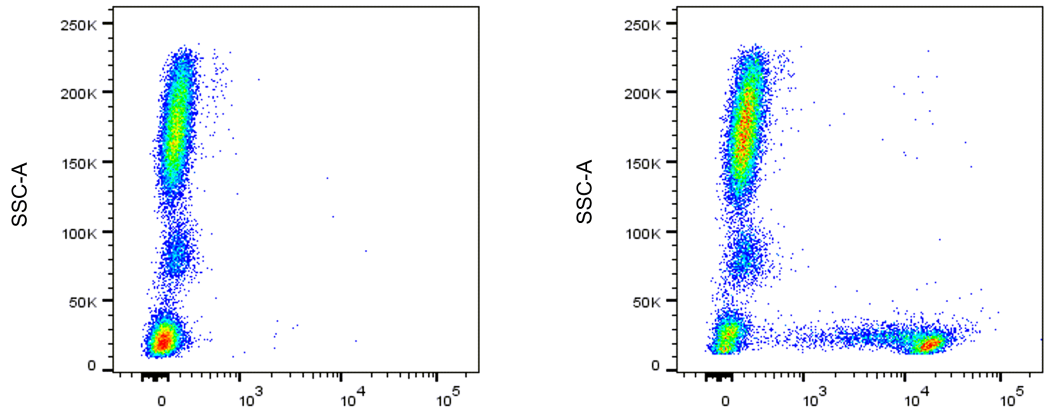
Product Information

Material Number:	**569170**
Alternate Name:	TNFRSF7; TNF receptor superfamily, member 7; T14; Tp55; S152
Entrez Gene ID:	939
Size:	50 µg
Concentration:	0.2 mg/ml
Clone:	M-T271
Immunogen:	Human T-CLL cells
Isotype:	Mouse (BALB/c) IgG1, κ
Reactivity:	QC Testing: Human Tested in Development: Rhesus, Cynomolgus, Baboon
Workshop:	IV T187; V 5T CD27.03
Storage Buffer:	Aqueous buffered solution containing ≤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.

The BD Horizon Brilliant Violet™ 605 (BV605) dye is part of the BD Horizon Brilliant Violet™ family of dyes. This tandem fluorochrome is comprised of a BV421 donor with an excitation maximum (Ex Max) of 407-nm and an acceptor dye with an emission maximum (Em Max) at 605-nm. BV605, driven by BD innovation, is designed to be excited by the violet laser (405-nm) and detected using an optical filter centered near 610-nm (e.g., a 610/20-nm bandpass filter). The acceptor dye can be excited by the yellow-green (561-nm) laser resulting in cross-laser excitation and fluorescence spillover. Please ensure that your instrument's configurations (lasers and optical filters) are appropriate for this dye.



Multiparameter flow cytometric analysis of CD27 expression on Human peripheral blood leucocyte populations. *Human whole blood was stained with either BD Horizon™ BV605 Mouse IgG1, κ Isotype Control (Cat. No. 562652; Left Plot) or BD Horizon™ BV605 Mouse Anti-Human CD27 antibody (Cat. No. 569170; Right Plot) at 0.25 µg/test. The erythrocytes were lysed with BD FACS™ Lysing Solution (Cat. No. 349202). The bivariate pseudocolor density plot showing the correlated expression of CD27 (or Ig Isotype control staining) versus side-light scatter (SSC-A) signals was derived from gated events with the forward and side light-scatter characteristics of intact leucocytes. Flow cytometry and data analysis were performed using a BD LSRFortessa™ X-20 Cell Analyzer System and FlowJo™ software. Data shown on this Technical Data Sheet are not lot specific.*

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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 the dye under optimum conditions and unconjugated antibody and free dye were removed.

Application Notes

Application

Flow cytometry	Routinely Tested

Recommended Assay Procedure:

BD® CompBeads can be used as surrogates to assess fluorescence spillover (compensation). When fluorochrome conjugated antibodies are bound to BD® CompBeads, they have spectral properties very similar to cells. However, for some fluorochromes there can be small differences in spectral emissions compared to cells , resulting in spillover values that differ when compared to biological controls. It is strongly recommended that when using a reagent for the first time, users compare the spillover on cells and BD® CompBeads to ensure that BD® CompBeads are appropriate for your specific cellular application.

For optimal and reproducible results, BD Horizon Brilliant™ Stain Buffer should be used anytime BD Horizon Brilliant dyes are used in a multicolor flow cytometry panel . Fluorescent dye interactions may cause staining artifacts which may affect data interpretation . The BD Horizon Brilliant Stain Buffer was designed to minimize these interactions . When BD Horizon Brilliant Stain Buffer is used in in the multicolor panel , it should also be used in the corresponding compensation controls for all dyes to achieve the most accurate compensation. For the most accurate compensation, compensation controls created with either cells or beads should be exposed to BD Horizon Brilliant Stain Buffer for the same length of time as the corresponding multicolor panel. More information can be found in the Technical Data Sheet of the BD Horizon Brilliant Stain Buffer (Cat. No. 563794/566349) or the BD Horizon Brilliant Stain Buffer Plus (Cat. No. 566385).

Suggested Companion Products

Catalog Number	Name	Size	Clone
554656	Stain Buffer (FBS)	500 mL	(none)
554657	Stain Buffer (BSA)	500 mL	(none)
566349	Brilliant Stain Buffer	1000 Tests	(none)
566385	Brilliant Stain Buffer Plus	1000 Tests	(none)

Product Notices

1. Please refer to www.bdbiosciences.com/us/s/resources for technical protocols.
2. 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.
3. 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.
4. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
5. For fluorochrome spectra and suitable instrument settings, please refer to our Multicolor Flow Cytometry web page at www.bdbiosciences.com/colors.
6. An isotype control should be used at the same concentration as the antibody of interest.
7. Although every effort is made to minimize the lot-to-lot variation in the efficiency of the fluorochrome energy transfer, differences in the residual emission from BD Horizon™ BV421 may be observed. Therefore, we recommend that individual compensation controls be performed for every BD Horizon™ BV605 conjugate.
8. BD Horizon Brilliant Violet 605 is covered by one or more of the following US patents: 8,110,673; 8,158,444; 8,227,187; 8,455,613; 8,575,303; 8,354,239.
9. BD Horizon Brilliant Stain Buffer is covered by one or more of the following US patents: 8,110,673; 8,158,444; 8,575,303; 8,354,239.
10. Species cross-reactivity detected in product development may not have been confirmed on every format and/or application.
11. Human donor specific background has been observed in relation to the presence of anti-polyethylene glycol (PEG) antibodies, developed as a result of certain vaccines containing PEG, including some COVID-19 vaccines. We recommend use of BD Horizon Brilliant™ Stain Buffer in your experiments to help mitigate potential background. For more information visit https://www.bdbiosciences.com/en-us/support/product-notices.
12. CF™ is a trademark of Biotium, Inc.
13. Please refer to http://regdocs.bd.com to access safety data sheets (SDS).
14. For U.S. patents that may apply, see bd.com/patents.

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)

Morimoto C. Cluster report: CD27. In: Schlossman SF. Stuart F. Schlossman .. et al., ed. *Leucocyte typing V : white cell differentiation antigens : proceedings of the fifth international workshop and conference held in Boston, USA, 3-7 November, 1993.* Oxford: Oxford University Press; 1995:356-357. (Clone-specific: Flow cytometry)

Lin G-X, Yang X, Hollemweguer E, et al. Cross-reactivity of CD antibodies in eight animal species. In: Mason D. David Mason .. et al., ed. *Leucocyte typing VII : white cell differentiation antigens : proceedings of the Seventh International Workshop and Conference held in Harrogate, United Kingdom.* Oxford: Oxford University Press; 2002:519-523. (Clone-specific: Flow cytometry)

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. W. Knapp .. et al., ed. *Leucocyte typing IV : white cell differentiation antigens.* Oxford New York: Oxford University Press; 1989:351-352. (Clone-specific: Blocking, Flow cytometry)

Kato K, Cantwell MJ, Sharma S, Kipps TJ. Gene transfer of CD40-ligand induces autologous immune recognition of chronic lymphocytic leukemia B cells. *J Clin Invest.* 1998; 101(5):1133-1141. (Clone-specific: ELISA, Flow cytometry)

Reiter C. T9. Cluster report: CD27. In: Knapp W. W. Knapp .. et al., ed. *Leucocyte typing IV : white cell differentiation antigens.* Oxford New York: Oxford University Press; 1989:350. (Clone-specific: Flow cytometry, Immunoprecipitation)