Technical Data Sheet

BV605 Mouse Anti-Human CD27

Product Information

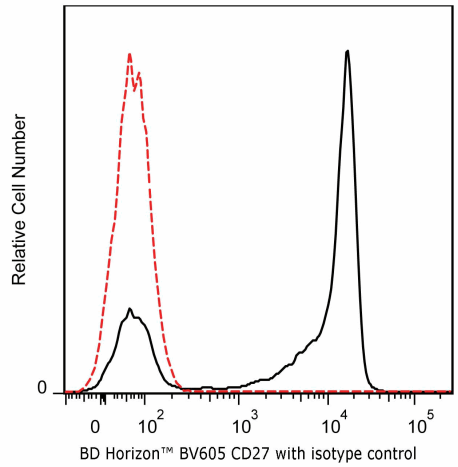
Material Number:	**562656**
Alternate Name:	TNFRSF7; Tumor necrosis factor receptor superfamily, member 7; Tp55; S152
Size:	25 Tests
Vol. per Test:	5 µl
Clone:	L128
Immunogen:	Human Activated Peripheral Blood Cells
Isotype:	Mouse (BALB/c) IgG1
Reactivity:	QC Testing: Human
Workshop:	VI T6T037
Storage Buffer:	Aqueous buffered solution containing BSA and ≤0.09% sodium azide.

Description

The L128 monoclonal antibody specifically binds to human CD27. CD27 is a 55-kDa disulfide-linked dimer that is a member of the nerve growth factor (NGF) super family. This family also includes CD40, rat OX40, tumor necrosis factor (TNF) receptors and CD95 (Fas). With its ligand CD70, CD27 acts in a co-stimulatory fashion on T lymphocytes. Present on most peripheral blood T lymphocytes and medullary thymocytes, the CD27 antigen is upregulated upon activation with the release of a soluble form, 28 to 32 kDa. It is also detected on a subpopulation of approximately 33% of circulating B lymphocytes. Following exposure to antigens, CD45RA+ T lymphocytes respond by upregulating the CD27 antigen. After maximal stimulation, the CD27 antigen cannot be re-expressed on long-term cultures or on CD45RA-CD27+ T lymphocytes. The CD4+CD27- population is contained within the memory CD45RO+ subset that proliferates after exposure to allergens. Two subpopulations of B lymphocytes bearing the CD27 antigen secrete IgM (δ+) and IgG (δ-).

This antibody is conjugated to BD Horizon BV605 which is part of the BD Horizon Brilliant™ Violet family of dyes. With an Ex Max of 407-nm and Em Max of 602-nm, BD Horizon BV605 can be excited by a violet laser and detected with a standard 610/20-nm filter set. BD Horizon BV605 is a tandem fluorochrome of BD Horizon BV421 and an acceptor dye with an Em max at 605-nm. Due to the excitation of the acceptor dye by the green (532 nm) and yellow-green (561 nm) lasers, there will be significant spillover into the PE and BD Horizon PE-CF594 detectors off the green or yellow-green lasers. BD Horizon BV605 conjugates are very bright, often exhibiting brightness equivalent to PE conjugates and can be used as a third color off of the violet laser.

For optimal and reproducible results, BD Horizon Brilliant Stain Buffer should be used anytime two or more BD Horizon Brilliant dyes are used in the same experiment. Fluorescent dye interactions may cause staining artifacts which may affect data interpretation. The BD Horizon Brilliant Stain Buffer was designed to minimize these interactions. More information can be found in the Technical Data Sheet of the BD Horizon Brilliant Stain Buffer (Cat. No. 563794).



***Flow cytometric analysis of CD27 expression on human peripheral blood lymphocytes**. Human whole blood was stained with the BD Horizon™ BV605 Mouse Anti-Human CD27 antibody (Cat. No. 562655/562656; solid line histogram) or with BD Horizon™ BV605 Mouse IgG1, κ Isotype Control (Cat. No. 562652; 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 Cytometry System.*

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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 with BD Horizon™ BV605 under optimum conditions, and unconjugated antibody and free BD Horizon™ BV605 were removed.

Application Notes

Application

Flow cytometry	Routinely Tested

Suggested Companion Products

Catalog Number	Name	Size	Clone
562652	BV605 Mouse IgG1, κ Isotype Control	50 µg	X40
554656	Stain Buffer (FBS)	500 mL	(none)
555899	Lysing Buffer	100 mL	(none)
562655	BV605 Mouse Anti-Human CD27	100 Tests	L128
563794	Brilliant Stain Buffer	5 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. An isotype control should be used at the same concentration as the antibody of interest.
3. 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.
4. 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.
5. Texas Red is a registered trademark of Molecular Probes, Inc., Eugene, OR.
6. Source of all serum proteins is from USDA inspected abattoirs located in the United States.
7. 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.
8. For fluorochrome spectra and suitable instrument settings, please refer to our Multicolor Flow Cytometry web page at www.bdbiosciences.com/colors.
9. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.
10. CF™ is a trademark of Biotium, Inc.

References

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