

Technical Data Sheet

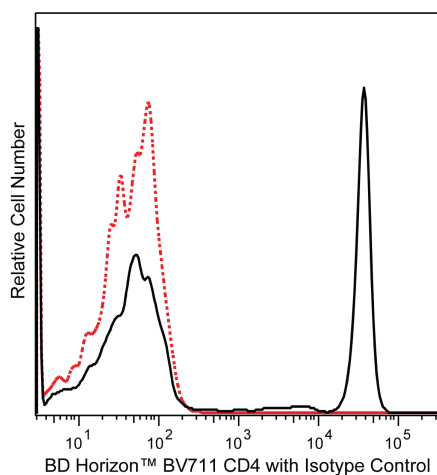
BV711 Mouse Anti-Human CD4**Product Information**

Material Number:	563033
Alternate Name:	L3T4; Leu3a; T-cell surface antigen T4/Leu-3 ; W3/25 ; CD4 antigen (p55)
Size:	25 tests
Vol. per Test:	5 µl
Clone:	SK3 (also known as Leu3a)
Immunogen:	Human Peripheral Blood T Cells
Isotype:	Mouse (BALB/c) IgG1, κ
Reactivity:	QC Testing: Human
Workshop:	I T38
Storage Buffer:	Aqueous buffered solution containing BSA and ≤0.09% sodium azide.

Description

The SK3 monoclonal antibody specifically binds to CD4. The CD4 antigen is a 55 kDa type 1 transmembrane glycoprotein that belongs to the immunoglobulin superfamily. It is expressed on T-helper/inducer lymphocytes and monocytes. CD3+CD4+ T cells comprise approximately 28% to 58% of normal peripheral blood lymphocytes. CD4 is also expressed on 80% to 95% of normal thymocytes. The CD4 antigen is present in low density on the cell surface of monocytes and in the cytoplasm of monocytes and macrophages (CD3-CD4+). CD4 serves as a T cell coreceptor for MHC class II antigen recognition and as a receptor for the human immunodeficiency virus (HIV). The SK3 antibody inhibits HIV binding to CD4+ cells.

The antibody was conjugated to BD Horizon™ BV711 which is part of the BD Horizon™ Brilliant Violet™ family of dyes. This dye is a tandem fluorochrome of BD Horizon™ BV421 with an Ex Max of 405-nm and an acceptor dye with an Em Max at 711-nm. BD Horizon™ BV711 can be excited by the violet laser and detected in a filter used to detect Cy™5.5 / Alexa Fluor® 700-like dyes (eg, 712/20-nm filter). Due to the excitation and emission characteristics of the acceptor dye, there may be moderate spillover into the Alexa Fluor® 700 and PerCP-Cy™5.5 detectors. However, the spillover can be corrected through compensation as with any other dye combination.



Flow cytometric analysis of CD4 expression on human peripheral blood lymphocytes. Human whole blood was stained with the BD Horizon™ BV711 Mouse Anti-Human CD4 antibody (Cat. No. 563028/563033, solid line histogram) or with a BD Horizon™ BV711 Mouse IgG1, κ Isotype Control (Cat. No. 563044, dashed line histogram). The erythrocytes were lysed with BD FACS™ Lysing Solution (Cat. No. 349202). 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 monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.

The antibody was conjugated with BD Horizon™ BV711 under optimum conditions, and unconjugated antibody and free BD Horizon™ BV711 were removed.

Application Notes**Application**

Flow cytometry

Routinely Tested

BD Biosciences

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Suggested Companion Products

Catalog Number	Name	Size	Clone
554656	Stain Buffer (FBS)	500 ml	(none)
563044	BV711 Mouse IgG1, k Isotype Control	50 µg	X40
555899	Lysing Buffer	100 ml	(none)
563028	BV711 Mouse Anti-Human CD4	100 tests	SK3

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. Brilliant Violet™ 711 is a trademark of Sirigen.
4. Alexa Fluor® is a registered trademark of Molecular Probes, Inc., Eugene, OR.
5. Cy is a trademark of Amersham Biosciences Limited.
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/pharming/protocols for technical protocols.

References

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