

Technical Data Sheet

V450 Mouse Anti-Human CD4

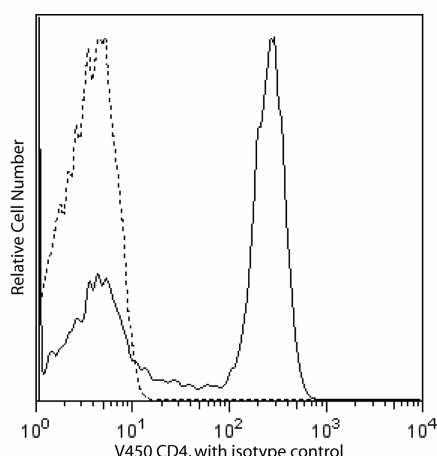
Product Information

Material Number:	561838
Alternate Name:	L3T4; T-cell surface antigen T4/Leu-3; W3/25; CD4 antigen (p55)
Size:	500 tests
Vol. per Test:	5 µl
Clone:	RPA-T4
Isotype:	Mouse IgG1, κ
Reactivity:	QC Testing: Human
Workshop:	IV T114
Storage Buffer:	Aqueous buffered solution containing protein stabilizer and ≤0.09% sodium azide.

Description

The RPA-T4 monoclonal antibody specifically binds to CD4, a 59 kDa single-chain transmembrane glycoprotein that is expressed on T-helper/inducer cell populations. CD4 is also expressed on thymocytes subsets and at lower levels on monocytes and macrophages. CD4 functions as a co-receptor in MHC class II-restricted antigen-induced T cell activation and as a receptor for human immunodeficiency viruses (HIV). This antibody binds to the D1 domain (CDR1 and CDR3 epitopes) of the CD4 antigen and reacts with approximately 80% of thymocytes and 45% of peripheral blood lymphocytes. RPA-T4 is capable of blocking HIV-1, gp120, and inhibits syncytium formation.

The antibody is conjugated to BD Horizon™ V450, which has been developed for use in multicolor flow cytometry experiments and is available exclusively from BD Biosciences. It is excited by the Violet laser Ex max of 406 nm and has an Em Max at 450 nm. Conjugates with BD Horizon™ V450 can be used in place of Pacific Blue™ conjugates.



Analysis of CD4 on human lymphocytes. Whole blood was stained with BD Horizon™ V450 Mouse Anti-Human CD4 and compared to whole blood stained with BD Horizon™ V450 Mouse IgG1, κ Isotype Control (clone MOPC-21, Cat. No. 560373). The isotype control is represented by a dashed line and the V450 Mouse Anti-Human CD4 by the solid line. Lymphocytes were selected by light scatter profile. Flow cytometry was performed on a BD LSR™ II flow cytometry 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™ V450 under optimum conditions, and unreacted BD Horizon™ V450 was removed.

Application Notes

Application

Flow cytometry	Routinely Tested
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Suggested Companion Products

Catalog Number	Name	Size	Clone
560373	V450 Mouse IgG1, κ Isotype Control	0.1 mg	MOPC-21
554656	Stain Buffer (FBS)	500 ml	(none)

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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- μ l experimental sample (a test).
2. Please refer to www.bdbiosciences.com/pharming/en/protocols for technical protocols.
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. For fluorochrome spectra and suitable instrument settings, please refer to our Multicolor Flow Cytometry web page at www.bdbiosciences.com/colors.
5. BD Horizon™ V450 has a maximum absorption of 406 nm and maximum emission of 450 nm. Before staining with this reagent, please confirm that your flow cytometer is capable of exciting the fluorochrome and discriminating the resulting fluorescence.
6. Pacific Blue™ is a trademark of Molecular Probes, Inc., Eugene, OR.
7. An isotype control should be used at the same concentration as the antibody of interest.

References

Knapp W, Dorken B, Rieber EP, et al, ed. *Leucocyte Typing IV*. New York: Oxford University Press; 1989:1-1208. (Clone-specific)

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

Schlossman SF, Boumell L, Gilks W, et al, ed. *Leucocyte Typing V: White Cell Differentiation Antigens*. New York: Oxford University Press; 1995. (Clone-specific)

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