Technical Data Sheet

V450 Mouse Anti-Human CD16

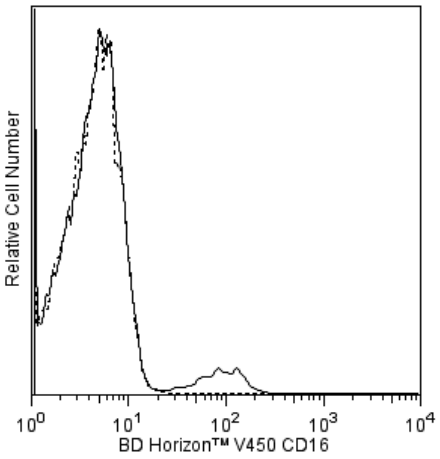
Product Information

Material Number:	**561310**
Alternate Name:	IgG Fc receptor III; IGFR3; FCG3; FCGR3; FCGRIII; FcγRIII
Size:	50 tests
Vol. per Test:	5 µl
Clone:	B73.1
Immunogen:	Human NK Cells
Isotype:	Mouse (BALB/c) IgG1, κ
Reactivity:	QC Testing: Human
Workshop:	IV NL402
Storage Buffer:	Aqueous buffered solution containing protein stabilizer and ≤0.09% sodium azide.

Description

The B73.1 monoclonal antibody specifically binds to CD16, the 50-70 kDa low affinity receptor for IgG, IgG Fc receptor III (FcγRIII). CD16 is expressed on NK cells, neutrophils, and on a subset of T cells from certain individuals. The B73.1 antibody binds to CD16-positive neutrophils with lower intensity when compared with some other CD16-specific antibodies. A variable number of CD16-positive lymphocytes coexpress either the CD57 antigen or low-density CD8 antigen or both. The B73.1 antibody can block Fc receptor functions mediated by CD16.

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.



Flow cytometric analysis of CD16 on human peripheral blood lymphocytes. *Human whole blood was stained with the BD Horizon™ V450 Mouse Anti-Human CD16 antibody (Cat. No. 561310; solid line histogram) or with a BD Horizon™ V450 Mouse IgG1, κ Isotype Control (Cat. No. 560373; dashed line histogram). The erythrocytes were lysed with BD PharmLyse™ 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

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.
Store undiluted at 4°C and protected from prolonged exposure to light. Do not freeze.

Application Notes

Application

Flow cytometry	Routinely Tested

Recommended Assay Procedure:

CAUTION: B73.1 binding is inhibited by human serum or aggregated IgG. In whole blood preparations, CD16 shows variable reactivity with granulocytes.

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Suggested Companion Products

Catalog Number	Name	Size	Clone
560373	V450 Mouse IgG1, κ Isotype Control	0.1 mg	MOPC-21
555899	Lysing Buffer	100 ml	(none)
554656	Stain Buffer (FBS)	500 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 refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.
4. 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.
5. For fluorochrome spectra and suitable instrument settings, please refer to our Multicolor Flow Cytometry web page at www.bdbiosciences.com/colors.
6. 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.
7. Pacific Blue™ is a trademark of Molecular Probes, Inc., Eugene, OR.

References

Lanier LL, Kipps TJ, Phillips JH. Functional properties of a unique subset of cytotoxic CD3+ T lymphocytes that express Fc receptors for IgG (CD16/Leu-11 antigen). *J Exp Med.* 1985; 162(6):2089-2106. (Clone-specific: Flow cytometry)

Lanier LL, Le AM, Civin CI, Loken MR, Phillips JH. The relationship of CD16 (Leu-11) and Leu-19 (NKH-1) antigen expression on human peripheral blood NK cells and cytotoxic T lymphocytes. *J Immunol.* 1986; 136(12):4480-4486. (Biology)

Lanier LL, Le AM, Phillips JH, Warner NL, Babcock GF. Subpopulations of human natural killer cells defined by expression of the Leu-7 (HNK-1) and Leu-11 (NK-15) antigens. *J Immunol.* 1983; 131(4):1789-1796. (Biology)

Perussia B, Acuto O, Terhorst C, et al. Human natural killer cells analyzed by B73.1, a monoclonal antibody blocking Fc receptor functions. II. Studies of B73.1 antibody-antigen interaction on the lymphocyte membrane. *J Immunol.* 1983; 130(5):2142-2148. (Clone-specific: Blocking, Flow cytometry, Immunoprecipitation, Radioimmunoassay)

Perussia B, Starr S, Abraham S, Fanning V, Trinchieri G. Human natural killer cells analyzed by B73.1, a monoclonal antibody blocking Fc receptor functions. I. Characterization of the lymphocyte subset reactive with B73.1. *J Immunol.* 1983; 130(5):2133-2141. (Immunogen: Cell separation, Flow cytometry)

Perussia B, Trinchieri G, Jackson A, et al. The Fc receptor for IgG on human natural killer cells: phenotypic, functional, and comparative studies with monoclonal antibodies. *J Immunol.* 1984; 133(1):180-189. (Clone-specific)

Schmidt RE. Non-lineage/natural killer section report: new and previously defined clusters. In: Knapp W, Dörken B, Gilks WR, et al, ed. *Leucocyte Typing IV: White Cell Differentiation Antigens*. 1989:517-542. (Biology)

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