

## Technical Data Sheet

## V450 Mouse Anti-Human IgD

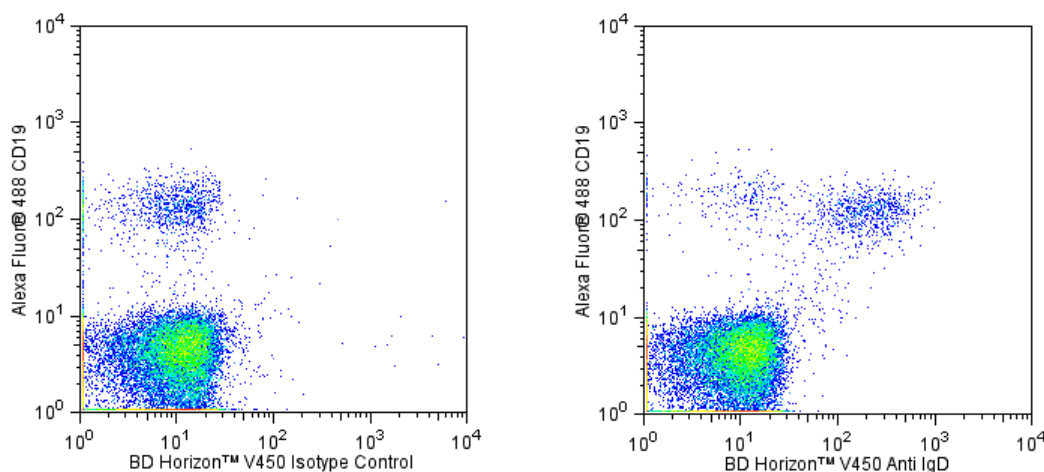
## Product Information

<b>Material Number:</b>	<b>561309</b>
<b>Alternate Name:</b>	IGHD; Ig delta chain C region; Immunoglobulin heavy constant delta
<b>Size:</b>	50 tests
<b>Vol. per Test:</b>	5 µl
<b>Clone:</b>	IA6-2
<b>Isotype:</b>	Mouse IgG2a, κ
<b>Reactivity:</b>	QC Testing: Human
<b>Storage Buffer:</b>	Aqueous buffered solution containing protein stabilizer and ≤0.09% sodium azide.

## Description

The IA6-2 monoclonal antibody specifically binds to the heavy chain of human Immunoglobulin D (IgD). IgD is a member of the immunoglobulin superfamily that exists in type 1-membrane (mIgD) and soluble glycoprotein forms. mIgD is expressed on mature naïve B cells (along with membrane IgM) and serves as a B-cell receptor for antigen (BCR). In response to antigen binding, the mIgD BCR, in association with other signaling molecules including CD79a and CD79b, can transduce activating or tolerizing signals intracellularly into B lymphocytes.

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 IgD expression on human peripheral blood lymphocytes.** Human peripheral blood mononuclear cells were incubated in complete tissue culture medium overnight in order to minimize subsequent nonspecific immunofluorescent staining. The cells were harvested and stained with Alexa Fluor® 488 Mouse anti-Human CD19 antibody (Cat. No. 557697) and with either BD Horizon™ V450 Mouse IgG2a, κ Isotype Control (Cat. No. 560550; Left Panel) or BD Horizon™ V450 Mouse anti-Human IgD antibody (Cat. No. 561309; Right Panel). The two-color flow cytometric dot plots showing the correlated expression of IgD (or Ig isotype control staining) versus CD19 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.

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## Application Notes

### Application

Flow cytometry

Routinely Tested

### Suggested Companion Products

<u>Catalog Number</u>	<u>Name</u>	<u>Size</u>	<u>Clone</u>
560550	V450 Mouse IgG2a, $\kappa$ Isotype Control	0.1 mg	G155-178
554656	Stain Buffer (FBS)	500 ml	(none)
557697	Alexa Fluor® 488 Mouse Anti-Human CD19	100 tests	HIB19

### Product Notices

1. This reagent has been pre-diluted for use at the recommended Volume per Test. We typically use  $1 \times 10^6$  cells in a 100- $\mu$ l 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/pharming/en/protocols](http://www.bdbiosciences.com/pharming/en/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 Fluorochrome Web Page at [www.bdbiosciences.com/colors](http://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

Preud'homme JL, Petit I, Barra A, Morel F, Lecron JC, Lelievre E. Structural and functional properties of membrane and secreted IgD. *Mol Immunol.* 2000; 37(15):871-887. (Biology)

Wei C, Anolik J, Cappione A, et al. A new population of cells lacking expression of CD27 represents a notable component of the B cell memory compartment in systemic lupus erythematosus. *J Immunol.* 2007; 178(10):6624-6633. (Clone-specific: Flow cytometry)

White MB, Shen AL, Word CJ, Tucker PW, Blattner FR. Human immunoglobulin D: genomic sequence of the delta heavy chain. *Science.* 1985; 228(4700):733-737. (Biology)