

Technical Data Sheet

BV750 Mouse Anti-Human IgD

Product Information

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| Material Number: | 747484 |
| Size: | 50 µg |
| Clone: | IA6-2 (also known as δ-IA6-2) |
| Alternative Name: | IGHD; Ig delta chain C region; Immunoglobulin heavy constant delta |
| Reactivity: | Human (Tested in Development) |
| Isotype: | Mouse BALB/c IgG2a, κ |
| Immunogen: | Human IgD |
| Application: | Flow cytometry (Qualified) |
| Concentration: | 0.2 mg/ml |
| Entrez Gene ID: | 3495 |
| Storage Buffer: | Aqueous buffered solution containing ≤0.09% sodium azide. |
| Regulatory Status: | RUO |

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 was conjugated to BD Horizon™ BV750 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 750-nm. BD Horizon Brilliant BV750 can be excited by the violet laser (405 nm) and detected with a 750/30 nm filter with a 740 nm long pass. Due to spectral differences between labeled cells and beads, using BD™ CompBeads can result in incorrect spillover values when used with BD Horizon BV750 reagents. Therefore, the use of BD CompBeads or BD CompBeads Plus to determine spillover values for these reagents is not recommended.

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 BV750 under optimal conditions that minimize unconjugated dye and antibody.

Recommended Assay Procedure

For optimal and reproducible results, BD Horizon Brilliant Stain Buffer should be used anytime two or more BD Horizon Brilliant dyes (including BD OptiBuild Brilliant reagents) 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).

Suggested Companion Products

| Catalog Number | Name | Size | Clone |
|----------------|--------------------------------------|-----------|----------|
| 554656 | Stain Buffer (FBS) | 500 mL | |
| 554657 | Stain Buffer (BSA) | 500 mL | |
| 563794 | Brilliant Stain Buffer | 100 Tests | |
| 555899 | Lysing Buffer | 100 mL | |
| 566368 | BV750 Mouse IgG2a, κ Isotype Control | 50 µg | G155-178 |
| 349202 | Lysing Solution 10X Concentrate | 100 NA | |
| 564219 | Human BD Fc Block™ | 50 mg | |

Product Notices

1. This antibody was developed for use in flow cytometry.
2. The production process underwent stringent testing and validation to assure that it generates a high-quality conjugate with consistent performance and specific binding activity. However, verification testing has not been performed on all conjugate lots.
3. Researchers should determine the optimal concentration of this reagent for their individual applications.
4. An isotype control should be used at the same concentration as the antibody of interest.
5. 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.
6. For fluorochrome spectra and suitable instrument settings, please refer to our Multicolor Flow Cytometry web page at www.bdbiosciences.com/colors.
7. Please refer to www.bdbiosciences.com/us/s/resources for technical protocols.
8. BD Horizon Brilliant Stain Buffer is covered by one or more of the following US patents: 8,110,673; 8,158,444; 8,575,303; 8,354,239.
9. BD Horizon Brilliant™ Violet 750 is covered by one or more of the following US patents: 8,158,444; 8,802,450; 8,575,303; 8,455,613; 8,227,187; 8,841,072; 8,110,673.

References

- Kruetzmann S, Rosado MM, Weber H, et al. Human immunoglobulin M memory B cells controlling *Streptococcus pneumoniae* infections are generated in the spleen. *J Exp Med*. 2003; 197(7):939-945.
- Odendahl M, Jacobi A, Hansen A, et al. Disturbed peripheral B lymphocyte homeostasis in systemic lupus erythematosus. *J Immunol*. 2000; 165(10):5970-5979.
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- 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):6624-33.
- 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.

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