

Technical Data Sheet

BV786 Mouse Anti-Human CD158b

Product Information

Material Number:	743455
Size:	50 µg
Clone:	CH-L
Alternative Name:	CD158b1/KIR2DL2/NKAT-6; CD158b2/KIR2DL3/NKAT-2; CD158j/ KIR2DS2/NKAT-5
Reactivity:	Human (Tested in Development)
Isotype:	Mouse BALB/c IgG2b, κ
Immunogen:	Human NK Cells
Application:	Flow cytometry (Qualified)
Concentration:	0.2 mg/ml
Storage Buffer:	Aqueous buffered solution containing ≤0.09% sodium azide.
Regulatory Status:	RUO

Description

The CH-L monoclonal antibody specifically binds to CD158b proteins. These proteins are 50-58 kDa type I glycoproteins that belong to the Killer cell immunoglobulin-like receptor (KIR) family: (KIR2DL2/L3/S2). They are also known as CD158b1 (KIR2DL2; NKAT-6; p58.2), CD158b2 (KIR2DL3; NKAT-2; p58.2), or CD158j (KIR2DS2; NKAT-5; p50.2). The CD158b molecules are composed of two extracellular Ig-like domains, and a transmembrane region. CD158b1 and CD158b2 also possess long (84 or 76 amino acids, respectively) cytoplasmic tails with two immunoreceptor tyrosine-based inhibition motifs (ITIM) whereas CD158j has a short (39 amino acid) cytoplasmic tail that lacks the ITIM motif. CD158b molecules are expressed on NK cells and subsets of TCR αβ+ cells or TCR γδ+ cells. Ligand- or CH-L antibody-bound CD158b1 or CD158b2 can reportedly inhibit cytolytic NK and T cell responses to various stimuli including certain target cells expressing MHC class I ligands encoded by HLA-C alleles (Cw 1, 3, 7 and 8). CD158j reportedly can enhance some cellular cytolytic responses.

The antibody was conjugated to BD Horizon™ BV786 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 786-nm. BD Horizon BV786 can be excited by the violet laser and detected in a filter used to detect Cy™7-like dyes (eg, 780/60-nm filter).

Preparation and Storage Section

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 BV786 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) RUO	500 mL	
554657	Stain Buffer (BSA) RUO	500 mL	
563794	Brilliant Stain Buffer RUO	100 Tests	
555899	Lysing Buffer RUO	100 mL	
349202	Lysing Solution 10X Concentrate IVD	100 NA	
564219	Human BD Fc Block™ RUO	50 mg	
564090	BV786 Mouse IgG2b, κ Isotype Control RUO	50 µg	

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 786 is covered by one or more of the following US patents: 8,110,673; 8,158,444; 8,227,187; 8,455,613; 8,575,303; 8,354,239.
10. Cy is a trademark of GE Healthcare.

References

- Cambiaggi A, Orengo AM, Meazza R, et al. The natural killer-related receptor for HLA-C expressed on T cells from CD3+ lymphoproliferative disease of granular lymphocytes displays either inhibitory or stimulatory function. *Blood*. 1996; 87(6):2369-2375.
- Colonna M, Samaridis J. Cloning of immunoglobulin-superfamily members associated with HLA-C and HLA-B recognition by human natural killer cells. *Science*. 1995; 268(5209):405-408.
- Ferrini S, Cambiaggi A, Meazza R, et al. T cell clones expressing the natural killer cell-related p58 receptor molecule display heterogeneity in phenotypic properties and p58 function. *Eur J Immunol*. 1994; 24(10):2294-2298.
- Kim J, Chwae YJ, Kim MY, Choi IH, Park JH, Kim SJ. Molecular basis of HLA-C recognition by p58 natural killer cell inhibitory receptors. *J Immunol*. 1997; 159(8):3875-3882.
- Moretta A, Bottino C, Biassoni R. CD158a (p58.1/p50.1) and CD158b (p58.2/p50.2) natural killer receptors for HLA-C alleles: Workshop Report. In: Kishimoto T, Tadami T, Kishimoto T, et al., ed. *Leucocyte typing VI : white cell differentiation antigens : proceedings of the sixth international workshop and conference held in Kobe, Japan, 10-14 November 1996*. New York: Garland Pub.; 1997; :290-292.
- Pascal V, Vivier E, Andre P. CD158 (killer immunoglobulin-like receptors family) report. In: Mason D, David Mason T, et al., ed. *Leucocyte typing VII : white cell differentiation antigens : proceedings of the Seventh International Workshop and Conference held in Harrogate, United Kingdom*. Oxford: Oxford University Press; 2002; :412-413.
- van Bergen J, Thompson A, van der Slik A, Ottenhoff TH, Gussekloo J, Koning F. Phenotypic and functional characterization of CD4 T cells expressing killer Ig-like receptors. *J Immunol*. 2004; 173(11):6719-6726.
- Warren HS, Kinnear BF. CD158a and b Workshop: Killer-inhibitory receptors and natural killer cell proliferation. In: Kishimoto T, Tadami T, Kishimoto T, et al., ed. *Leucocyte typing VI : white cell differentiation antigens : proceedings of the sixth international workshop and conference held in Kobe, Japan, 10-14 November 1996*. New York: Garland Pub.; 1997; :292-294.

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