Technical Data Sheet

BV480 Rat Anti-Mouse CD18

Product Information

Material Number:	746829
Size:	50 µg
Clone:	M18/2
Alternative Name:	Cd18; ITGB2; Integrin β2 chain
Reactivity:	Mouse (Tested in Development)
Isotype:	Rat IgG2a, κ
Immunogen:	Mouse CTL glycoproteins
Application:	Flow cytometry (Qualified)
Concentration:	0.2 mg/ml
Storage Buffer:	Aqueous buffered solution containing ≤0.09% sodium azide.
Regulatory Status:	RUO

Description

The M18/2 antibody specifically recognizes the common β2 chain of LFA-1 (CD11a/CD18, αLβ2 integrin), Mac-1 (CD11b/CD18, αMβ2 integrin), and gp150, 95 (CD11c/CD18, αXβ2 integrin). Expression of CD18 is limited to leukocytes, where it is widely distributed in consort with the three integrin α chains (CD11a, CD11b, and CD11c). Among splenocytes, NK cells have the highest density of CD18, and T lymphocytes express a higher density than the remaining cells. The β2 integrins are important mediators of leukocyte-endothelium interactions. It has been reported that M18/2 antibody blocks in vivo metastasis of the LB lymphoma to the spleen and that it blocks in vitro formation of aggregates of LB cells and splenocytes. However, other reports indicate that mAb M18/2 has no effect on CTL-mediated killing, adherence of C3bi-sensitized erythrocytes to Mac-1, antigen-specific binding of T cells to antigen-producing cells, or rejection of cardiac allografts. Recent in vitro studies indicate that M18/2 antibody stimulates adhesion of Mac-1 to its ligands C3bi and ICAM-1, and it stimulates adhesion of LFA-1 to ICAM-1, but it has no effect upon the interactions of LFA-1 with ICAM-2 nor ICAM-3.

The antibody was conjugated to BD Horizon BV480 which is part of the BD Horizon Brilliant™ Violet family of dyes. With an Ex Max of 436-nm and Em Max at 478-nm, BD Horizon BV480 can be excited by the violet laser and detected in the BD Horizon BV510 (525/40-nm) filter set. BV480 has less spillover into the BV605 detector and, in general, is brighter than BV510.

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 to the dye under optimum conditions that minimize unconjugated dye and antibody.

Recommended Assay Procedure

BD™ CompBeads can be used as surrogates to assess fluorescence spillover (Compensation). When fluorochrome conjugated antibodies are bound to CompBeads, they have spectral properties very similar to cells. However, for some fluorochromes there can be small differences in spectral emissions compared to cells, resulting in spillover values that differ when compared to biological controls. It is strongly recommended that when using a reagent for the first time, users compare the spillover on cells and CompBead to ensure that BD Comp beads are appropriate for your specific cellular application.

For optimal and reproducible results, BD Horizon Brilliant Stain Buffer should be used anytime two or more BD Horizon Brilliant dyes 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. 563794/566349) or the BD Horizon Brilliant Stain Buffer Plus (Cat. No. 566385).

For Immunofluorescence Applications:
The use of a mounting reagent (eg, ProLong® Gold) is highly recommended to maximize the photostability of BV480. For confocal microscopy systems, a 440 nm laser is the optimal excitation source and the recommended emission filter is a 485/20 nm bandpass filter.

For epifluorescence microscopes with broad spectrum excitation sources, the recommended excitation and emission filters are 445/20 nm and 485/20 nm bandpass filters, respectively. For specific multicolor imaging applications, the exact filter configurations should be optimized by the end user. For additional instrument/filter configuration information, please visit http://www.bdbiosciences.com/research/cellularimaging.

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	
565630	BV480 Rat IgG2a, κ Isotype Control RUO	50 µg	
553141	Purified Rat Anti-Mouse CD16/CD32 (Mouse BD Fc Block™) 2.4G2 RUO	0.1 mg	
566349	Brilliant Stain Buffer RUO	1000 Tests	
566385	Brilliant Stain Buffer Plus RUO	1000 Tests	

Product Notices

1. 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.
2. Researchers should determine the optimal concentration of this reagent for their individual applications.
3. An isotype control should be used at the same concentration as the antibody of interest.
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 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.
7. BD Horizon Brilliant Violet 480 is covered by one or more of the following US patents: 8,575,303; 8,354,239.
8. Please refer to http://regdocs.bd.com to access safety data sheets (SDS).
9. Please refer to www.bdbiosciences.com/us/s/resources for technical protocols.

References

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