

Technical Data Sheet

BV711 Hamster Anti-Mouse CD29

Product Information

Material Number:	740708
Size:	50 µg
Clone:	HM β1-1
Alternative Name:	Itgb1; Integrin beta-1; Fnrb; gpIIa; VLA-4 subunit beta
Reactivity:	Mouse (Tested in Development)
Isotype:	Armenian Hamster IgG2, λ1
Immunogen:	Purified mouse VLA-4
Application:	Flow cytometry (Qualified)
Concentration:	0.2 mg/ml
Entrez Gene ID:	16412
Storage Buffer:	Aqueous buffered solution containing ≤0.09% sodium azide.
Regulatory Status:	RUO

Description

The HM β1-1 monoclonal antibody specifically binds to the 130-kDa integrin β1 chain (CD29). CD29 is expressed on the cell surface as a heterodimer with one of the distinct integrin-α chains. With α1 through α6 (CD49a through CD49f), it forms the VLA-1 through VLA-6 complexes, respectively, and with αv (CD51), it forms αvβ1 integrin. It also associates with the integrin α7 α8, and α9 chains in non-lymphoid tissues. As a result, CD29 has a broad tissue distribution, including lymphocytes, endothelia, smooth muscle, epithelia, and oocytes. This hamster mAb to a mouse leukocyte antigen has been observed to crossreact with similar populations of rat leukocytes. Source of the immunogen was purified mouse VLA-4 (α4β1, CD49d/CD29).

The antibody was conjugated to BD Horizon™ BV711 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 711-nm. BD Horizon BV711 can be excited by the violet laser and detected in a filter used to detect Cy™5.5 / Alexa Fluor® 700-like dyes (eg, 712/20-nm filter). Due to the excitation and emission characteristics of the acceptor dye, there may be moderate spillover into the Alexa Fluor® 700 and PerCP-Cy5.5 detectors. However, the spillover can be corrected through compensation as with any other dye combination.

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 BV711 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
563989	BV711 Hamster IgG2, κ Isotype Control RUO	50 µg	
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	
553141	Purified Rat Anti-Mouse CD16/CD32 (Mouse BD Fc Block™) 2.4G2 RUO	0.1 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 711 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 Amersham Biosciences Limited.
11. Alexa Fluor® is a registered trademark of Life Technologies Corporation.

References

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- Wadsworth SA, Chang AC, Hong MJ, Halvorson MJ, Otto S, Coligan JE. Expression of a novel integrin beta 1 chain epitope and anti-beta 1 antibody-mediated enhancement of fibronectin binding are dependent on the stage of T cell differentiation. *J Immunol*. 1995; 154(5):2125-2133.
- Wu X, Miyake K, Medina KL, Kincade PW, Gimble JM. Recognition of murine integrin beta 1 by a rat anti-stromal cell monoclonal antibody. *Hybridoma*. 1994; 13(5):409-416.

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