Technical Data Sheet

V450 Hamster Anti-Rat CD29

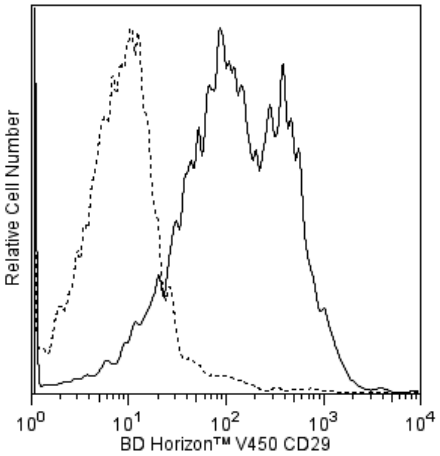
Product Information

Material Number:	**562155**
Alternate Name:	Itgb1; Integrin β1 chain; Integrin beta-1; VLA-4 subunit beta
Size:	50 µg
Concentration:	0.2 mg/ml
Clone:	Ha2/5
Immunogen:	Rat glomerular epithelial cells
Isotype:	Armenian Hamster IgM, κ
Reactivity:	QC Testing: Rat
Storage Buffer:	Aqueous buffered solution containing protein stabilizer, glycerol and ≤0.09% sodium azide.

Description

The Ha2/5 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. As a result, CD29 has a broad tissue distribution, including lymphocytes, endothelia, smooth muscle, and epithelia. The Ha2/5 hamster anti-rat CD29 monoclonal antibody cross-reacts with mouse thymocytes, splenocytes, and peripheral lymph node leukocytes. The Ha2/5 antibody blocks *in vitro* adhesion of CD29-expressing cells to collagen.

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 CD29 expression on rat splenocytes. *Lewis rat splenocytes were stained with either BD Horizon™ V450 Armenian Hamster IgM, λ1 Isotype Control (Cat. No. 562116, dashed line histogram) or a BD Horizon™ V450 Hamster Anti-rat CD29 antibody (Cat. No. 562155, solid line histogram). Flow cytometric fluorescence histograms were derived from gated events based on forward and side light-scatter characteristics of viable splenocytes. Flow cytometry was performed using a BD™ LSR II Flow Cytometer System.*

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™ V450 under optimum conditions, and unreacted BD Horizon™ V450 was removed.

Application Notes

Application

Flow cytometry	Routinely Tested

Suggested Companion Products

Catalog Number	Name	Size	Clone
562116	V450 Hamster IgM, λ1 Isotype Control	0.1 mg	G235-1
554656	Stain Buffer (FBS)	500 ml	(none)

BD Biosciences

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Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. An isotype control should be used at the same concentration as the antibody of interest.
3. Please refer to www.bdbiosciences.com/pharmingen/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.
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.
8. Although hamster immunoglobulin isotypes have not been well defined, BD Biosciences Pharmingen has grouped Armenian and Syrian hamster IgG monoclonal antibodies according to their reactivity with a panel of mouse anti-hamster IgG mAbs. A table of the hamster IgG groups, Reactivity of Mouse Anti-Hamster Ig mAbs, may be viewed at http://www.bdbiosciences.com/pharmingen/hamster_chart_11x17.pdf.

References

Mendrick DL, Kelly DM. Temporal expression of VLA-2 and modulation of its ligand specificity by rat glomerular epithelial cells in vitro. *Lab Invest.* 1993; 69(6):690-702. (Immunogen)

Springer TA. Adhesion receptors of the immune system. *Nature.* 1990; 346(6283):425-434. (Biology)