

## Technical Data Sheet

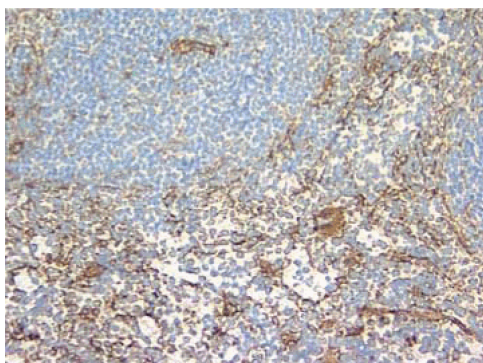
## Purified Hamster Anti-Mouse CD29

## Product Information

|                         |                                                                                |
|-------------------------|--------------------------------------------------------------------------------|
| <b>Material Number:</b> | <b>550530</b>                                                                  |
| <b>Alternate Name:</b>  | Itgb1; Integrin beta-1; Fnrb; gpIIa; VLA-4 subunit beta                        |
| <b>Size:</b>            | 1.0 ml                                                                         |
| <b>Concentration:</b>   | 15.625 µg/ml                                                                   |
| <b>Clone:</b>           | HM β1-1                                                                        |
| <b>Immunogen:</b>       | Purified mouse VLA-4                                                           |
| <b>Isotype:</b>         | Armenian Hamster IgG2, λ1                                                      |
| <b>Reactivity:</b>      | QC Testing: Mouse<br>Tested in Development: Rat                                |
| <b>Storage Buffer:</b>  | Aqueous buffered solution containing BSA, goat serum, and ≤0.09% sodium azide. |

## 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).



**Immunohistochemical staining of CD29 positive cells.**  
Frozen sections of normal mouse spleen were stained with Purified Hamster Anti-Mouse CD29 (Cat. No. 550530) antibody. Endothelial cells of the central arteriole and splenic sinuses can be identified by the brown labeling of their cell membranes. Amplification 20X.

## Preparation and Storage

Store undiluted at 4°C.

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.

## Application Notes

## Application

|                                                            |                           |
|------------------------------------------------------------|---------------------------|
| Flow cytometry                                             | Routinely Tested          |
| Immunohistochemistry-frozen                                | Tested During Development |
| Immunohistochemistry-formalin (antigen retrieval required) | Not Recommended           |

## Recommended Assay Procedure:

**Immunohistochemistry:** The HM β1-1 antibody specific for mouse CD29 is recommended to test for immunohistochemical staining of acetone-fixed frozen sections. Tissues tested were mouse spleen and thymus. The antibody stains lymphocytes and endothelial cells. The isotype control recommended for use with this antibody is purified hamster IgG (550345). For optimal indirect immunohistochemical staining, the HM β1-1 antibody should be titrated (1-10 to 1-50 dilution) and visualized via a three-step staining procedure in combination with anti-hamster IgG cocktail (Cat. No. 550335) as the secondary antibody and Streptavidin-HRP (Cat. No. 550946) together with the DAB detection system (Cat. No. 550880). The clone HM β1-1 is not recommended for formalin-fixed paraffin embedded sections. Clone HMβ1 also works on rat acetone fixed frozen sections (tested during development).

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| 877.232.8995         | 800.268.5430  | 32.2.400.98.95 | 0120.8555.90 | 65.6861.0633        | 55.11.5185.9995                |

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## Suggested Companion Products

| Catalog Number | Name                                               | Size      | Clone  |
|----------------|----------------------------------------------------|-----------|--------|
| 550335         | Biotin Mouse Anti-Hamster IgG Cocktail             | 1.0 ml    | G94-56 |
| 550946         | Streptavidin HRP                                   | 50 ml     | (none) |
| 550880         | DAB Substrate Kit                                  | 500 tests | (none) |
| 550345         | Purified Hamster IgG2, $\lambda$ 1 Isotype Control | 1.0 ml    | Ha4/8  |

## Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. 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/documents/hamster\\_chart\\_11x17.pdf](http://www.bdbiosciences.com/documents/hamster_chart_11x17.pdf).
3. 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.
4. Sodium azide is a reversible inhibitor of oxidative metabolism; therefore, antibody preparations containing this preservative agent must not be used in cell cultures nor injected into animals. Sodium azide may be removed by washing stained cells or plate-bound antibody or dialyzing soluble antibody in sodium azide-free buffer. Since endotoxin may also affect the results of functional studies, we recommend the NA/LE (No Azide/Low Endotoxin) antibody format, if available, for in vitro and in vivo use.
5. Source of all serum proteins is from USDA inspected abattoirs located in the United States.
6. This antibody has been developed for the immunohistochemistry application. However, a routine immunohistochemistry test is not performed on every lot. Researchers are encouraged to titrate the reagent for optimal performance.
7. An isotype control should be used at the same concentration as the antibody of interest.
8. Please refer to [www.bdbiosciences.com/pharmingen/protocols](http://www.bdbiosciences.com/pharmingen/protocols) for technical protocols.

## References

Jackson Laboratory. Mouse Genome Database. Available: <http://www.informatics.jax.org/> 1998, Sept. 17. (Biology)

Noto K, Kato K, Okumura K, Yagita H. Identification and functional characterization of mouse CD29 with a mAb. *Int Immunol*. 1995; 7(5):835-842. (Immunogen)

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

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