Technical Data Sheet

Purified Armenian Hamster Anti-Mouse CD29

Product Information

Material Number:	**553837**
Alternate Name:	Integrin β1 chain
Size:	0.5 mg
Concentration:	0.5 mg/ml
Clone:	HM β1-1
Immunogen:	Purified mouse VLA-4
Isotype:	Armenian Hamster IgG2, λ1
Reactivity:	QC Testing: Mouse Tested in Development: Rat
Storage Buffer:	Aqueous buffered solution containing ≤0.09% sodium azide.

Description

The HMβ1-1 antibody reacts with 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 cross-react with similar populations of rat leukocytes. Source of the immunogen was purified mouse VLA-4 (α4β1, CD49d/CD29).

Preparation and Storage

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.
Store undiluted at 4° C.

Application Notes

Application

Flow cytometry	Routinely Tested
Immunoprecipitation	Reported
Blocking	Reported
Inhibition	Reported

Recommended Assay Procedure:

Other reported applications include immunoprecipitation and in vitro inhibition (in combination with a mAb to mouse CD11a) of T-cell proliferative responses to anti-CD3e mAb 145-2C11 (Cat. no. 553057) and allogeneic cells. For in vitro blocking of adhesion of mouse or rat CD29-expressing cells to extracellular matrix proteins, we recommend the No Azide/Low Endotoxin (NA/LE™) format of mAb Ha2/5 (Cat. no. 555002). We recommend our immunohistochemistry formulation of purified HMß1-1 mAb, Cat. no. 550530, for immunohistochemical staining (IHC) of rat tissues. For IHC of mouse tissues, we recommend the use of purified anti-mouse CD29 mAb 9EG7 in our special formulation for immunohistochemistry, Cat. no. 550531.

Suggested Companion Products

Catalog Number	Name	Size	Clone
553057	Purified NA/LE Hamster Anti-Mouse CD3e	0.5 mg	145-2C11
555002	Purified NA/LE Hamster Anti-Rat CD29	0.5 mg	Ha2/5
550530	Purified Hamster Anti-Mouse CD29	1.0 ml	HM β1-1
550531	Purified Rat Anti-Mouse CD29	1.0 ml	9EG7
554056	PE Mouse Anti-Armenian and Syrian Hamster IgG Cocktail	0.2 mg	(none)
553962	Purified Hamster IgG2, λ1 Isotype Control	0.5 mg	Ha4/8

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Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.
3. 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.
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. 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.

References

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

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.(Clone-specific: Blocking)

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: Immunoprecipitation, Inhibition)

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