Technical Data Sheet

Purified Rat Anti-Mouse CD29

Product Information

Material Number:	**553715**
Alternate Name:	Integrin β1 chain
Size:	0.5 mg
Concentration:	0.5 mg/ml
Clone:	9EG7
Immunogen:	Mouse endothelial cell line
Isotype:	Rat IgG2a, κ
Reactivity:	QC Testing: Mouse
Storage Buffer:	Aqueous buffered solution containing ≤0.09% sodium azide.

Description

The 9EG7 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, and epithelia. 9EG7 mAb has been shown to inhibit both the α6β1-mediated binding of lymphocytes to endothelial cells and the adhesion mediated by activated, but not unactivated, α4β1-integrin. The source of the immunogen was mouse lymph node-derived endothelial cell line TME.

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
Immunohistochemistry-paraffin	Tested During Development
Western blot	Reported
Immunoprecipitation	Reported
Functional assay	Reported

Recommended Assay Procedure:
For IHC, we recommend the use of purified 9EG7 mAb in our special formulation for immunohistochemistry, Cat. No. 550531.

Suggested Companion Products

Catalog Number	Name	Size	Clone
553927	Purified Rat IgG2a, κ Isotype Control	0.5 mg	R35-95
554016	FITC Goat Anti-Rat Igs	0.5 mg	Polyclonal

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. 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.

BD Biosciences

www.bdbiosciences.com

United States	Canada	Europe	Japan	Asia Pacific	Latin America/Caribbean
877.232.8995	888.259.0187	32.53.720.550	0120.8555.90	65.6861.0633	55.11.5185.9995

For country-specific contact information, visit **www.bdbiosciences.com/how_to_order/**

References

Driessens MH, Van Rijthoven EA, Kemperman H, Roos E. Adhesion of lymphoma cells to fibronectin: differential use of alpha 4 beta 1 and alpha 5 beta 1 integrins and stimulation by the 9EG7 mAb against the murine beta 1 integrin subunit. *Cell Adhes Commun.* 1995; 3(4):327-336.(Clone-specific: Functional assay)

Kassner PD, Kawaguchi S, Hemler ME. Minimum alpha chain cytoplasmic tail sequence needed to support integrin-mediated adhesion. *J Biol Chem.* 1994; 269(31):19859-19867.(Clone-specific: Functional assay)

Lenter M, Uhlig H, Hamann A, Jenö P, Imhof B, Vestweber D. A monoclonal antibody against an activation epitope on mouse integrin chain beta 1 blocks adhesion of lymphocytes to the endothelial integrin alpha 6 beta 1. *Proc Natl Acad Sci U S A.* 1993; 90(19):9051-9055.(Immunogen: Functional assay, Immunoprecipitation)

Lenter M, Vestweber D. The integrin chains beta 1 and alpha 6 associate with the chaperone calnexin prior to integrin assembly. *J Biol Chem.* 1994; 269(16):12263-12268.(Clone-specific: Functional assay, Immunoaffinity chromatography, Immunoprecipitation, Western blot)

Milner R, Edwards G, Streuli C, Ffrench-Constant C. A role in migration for the alpha V beta 1 integrin expressed on oligodendrocyte precursors. *J Neurosci.* 1996; 16(22):7240-7252.(Clone-specific: Functional assay, Immunoprecipitation)

Mouse Genome Database (MGD), Mouse Genome Informatics, The Jackson Laboratory. B2m, beta-2 microglobulin. Available: http://www.informatics.jax.org 4/15/1998.(Biology)

Rich S, Van Nood N, Lee HM. Role of alpha 5 beta 1 integrin in TGF-beta 1-costimulated CD8+ T cell growth and apoptosis. *J Immunol.* 1996; 157(7):2916-2923.(Clone-specific: Functional assay)

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

Yashiro Y, Tai XG, Toyo-oka K, et al. A fundamental difference in the capacity to induce proliferation of naive T cells between CD28 and other co-stimulatory molecules. *Eur J Immunol.* 1998; 28(3):926-935.(Biology)