

Technical Data Sheet

Purified Rat Anti-Mouse CD49e

Product Information

Material Number:	553319
Alternate Name:	Integrin $\alpha 5$ chain
Size:	0.5 mg
Concentration:	0.5 mg/ml
Clone:	5H10-27 (MFR5)
Immunogen:	Mouse mast cell line MC/9
Isotype:	Rat (LEW) IgG2a, κ
Reactivity:	QC Testing: Mouse
Storage Buffer:	Aqueous buffered solution containing $\leq 0.09\%$ sodium azide.

Description

The 5H10-27 (MFR5) antibody reacts with the $\alpha 5$ chain of the integrin $\alpha 5\beta 1$ fibronectin receptor (CD49e/CD29, VLA-5) on thymocytes, activated T lymphocytes, mast cells, and a variety of mouse cell lines, but not splenocytes. Soluble 5H10-27 (MFR5) antibody has been reported to inhibit VLA-5-mediated functions in vitro. In addition, immobilized mAb 5H10-27 (MFR5) has been demonstrated to costimulate the proliferative response of CD8+ T cells to plate-bound anti-CD3e antibody.

This antibody is routinely tested by flow cytometric analysis. Other applications were tested at BD Biosciences Pharmingen during antibody development only or reported in the literature.

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
Blocking	Reported
(Co)-stimulation	Reported
Immunofluorescence	Reported
Immunohistochemistry-frozen	Reported
Immunohistochemistry-paraffin	Not Recommended

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 Ig	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.
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.

References

Cukierman E, Pankov R, Stevens DR, Yamada KM. Taking cell-matrix adhesions to the third dimension. *Science*. 2001; 294(5547):1708-1712. (Clone-specific: Immunofluorescence, Immunohistochemistry)

Gomez M, Cano A. Expression of beta 1 integrin receptors in transformed mouse epidermal keratinocytes: upregulation of alpha 5 beta 1 in spindle carcinoma cells. *Mol Carcinog*. 1995; 12(3):153-165. (Clone-specific: Immunofluorescence, Immunohistochemistry)

Halvorson MJ, Coligan JE. Enhancement of VLA integrin receptor function on thymocytes by cAMP is dependent on the maturation stage of the thymocytes. *J Immunol*. 1995; 155(10):4567-4574. (Clone-specific: Blocking)

Hardy CL, Minguell JJ. Modulation of the adhesion of hemopoietic progenitor cells to the RGD site of fibronectin by interleukin 3. *J Cell Physiol*. 1995; 164(2):315-323. (Biology)

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Kinashi T, Springer TA. Adhesion molecules in hematopoietic cells. *Blood Cells*. 1994; 20(1):25-44. (Immunogen: Blocking)

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: Blocking, (Co)-stimulation)

Ruppert M, Aigner S, Hubbe M, Yagita H, Altevogt P. The L1 adhesion molecule is a cellular ligand for VLA-5. *J Cell Biol*. 1995; 131(6):1881-1891. (Clone-specific: Blocking)

Schultz JF, Armant DR. Beta 1- and beta 3-class integrins mediate fibronectin binding activity at the surface of developing mouse peri-implantation blastocysts. Regulation by ligand-induced mobilization of stored receptor. *J Biol Chem*. 1995; 270(19):11522-11531. (Clone-specific: Blocking)

Uhlenkott CE, Huijzer JC, Carneiro DJ, Elstad CA, Meadows GG. Attachment, invasion, chemotaxis, and proteinase expression of B16-BL6 melanoma cells exhibiting a low metastatic phenotype after exposure to dietary restriction of tyrosine and phenylalanine. *Clin Exp Metastasis*. 1996; 14(2):125-137. (Clone-specific: Blocking)

Yang JT, Hynes RO. Fibronectin receptor functions in embryonic cells deficient in alpha 5 beta 1 integrin can be replaced by alpha V integrins. *Mol Biol Cell*. 1996; 7(11):1737-1748. (Clone-specific: Immunofluorescence, Immunohistochemistry)