

Technical Data Sheet

Purified NA/LE Rat Anti-Mouse CD103

Product Information

Material Number:	553699
Alternate Name:	Itgae; Integrin alpha-E; α E; alpha-E1; ITAE; Integrin α IEL chain; aM290
Size:	0.5 mg
Concentration:	1.0 mg/ml
Clone:	M290
Immunogen:	Mouse Intestinal Epithelial Cells
Isotype:	Rat (LOU) IgG2a, κ
Reactivity:	QC Testing: Mouse
Storage Buffer:	No azide/low endotoxin: Aqueous buffered solution containing no preservative, 0.2 μ m sterile filtered. Endotoxin level is \leq 0.01 EU/ μ g (\leq 0.001 ng/ μ g) of protein as determined by the LAL assay.

Description

The M290 antibody specifically binds to CD103, the α chain of α IEL β 7 integrin. CD103 has a unique and fairly restricted tissue distribution. It is expressed on almost all intestinal intraepithelial lymphocytes (IEL), on dendritic epidermal T cells (DEC), on subpopulations of peripheral T cells, and on distinct subsets of fetal, neonatal, and adult thymocytes. E-cadherin is the epithelial-cell ligand for α IEL β 7 integrin. The ordered expression of α IEL during thymocyte development (which occurs under the influence of the thymic epithelium), the high level of expression of α IEL on those peripheral T cells found in epithelial tissues (IEL and DEC), and the expression of CD103 on a subset of CD8+ lymphocytes responding to allogeneic epithelial cells suggest that α IEL β 7 integrin may have a common role in the interactions of T lymphocytes with epithelia during T-cell maturation and effector functions. CD103 is thought to play a role in allograft rejection. The M290 antibody is reported to efficiently inhibit α IEL β 7-mediated adhesion in *in vitro* assays.

Preparation and Storage

Store undiluted at 4°C.

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

This preparation contains no preservatives, thus it should be handled under aseptic conditions.

Application Notes

Application

Flow cytometry	Routinely Tested
(Co)-stimulation	Reported
Blocking	Reported
Immunohistochemistry-frozen	Reported
Immunoprecipitation	Reported

Suggested Companion Products

Catalog Number	Name	Size	Clone
553926	Purified NA/LE 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 wwwbdbiosciences.com/pharmingen/protocols for technical protocols.

References

Andrew DP, Rott LS, Kilshaw PJ, Butcher EC. Distribution of alpha 4 beta 7 and alpha E beta 7 integrins on thymocytes, intestinal epithelial lymphocytes and peripheral lymphocytes. *Eur J Immunol.* 1996; 26(4):897-905. (Biology)

Feng Y, Wang D, Yuan R, Parker CM, Farber DL, Hadley GA. CD103 expression is required for destruction of pancreatic islet allografts by CD8(+) T cells. *J Exp Med.* 2002; 196(7):877-886. (Biology)

Hadley GA, Bartlett ST, Via CS, Rostapshova EA, Moainie S. The epithelial cell-specific integrin, CD103 (alpha E integrin), defines a novel subset of alloreactive CD8+ CTL. *J Immunol.* 1997; 159(8):748-756. (Biology)

Karecla PI, Bowden SJ, Green SJ, Kilshaw PJ. Recognition of E-cadherin on epithelial cells by the mucosal T cell integrin alpha M290 beta 7 (alpha E beta 7). *Eur J Immunol.* 1995; 25(3):852-856. (Clone-specific: Blocking)

Karecla PI, Green SJ, Bowden SJ, Coadwell J, Kilshaw PJ. Identification of a binding site for integrin alphaEbeta7 in the N-terminal domain of E-cadherin. *J Biol Chem.* 1996; 271(48):30909-30915. (Clone-specific: Blocking)

Kilshaw PJ, Baker KC. A unique surface antigen on intraepithelial lymphocytes in the mouse. *Immunol Lett.* 1988; 18(2):149-154. (Immunogen: Immunohistochemistry, Immunoprecipitation)

BD Biosciences

bdbiosciences.com

United States	Canada	Europe	Japan	Asia Pacific	Latin America/Caribbean
877.232.8995	800.979.9408	32.53.720.550	0120.8555.90	65.6861.0633	55.11.5185.9995

For country contact information, visit bdbiosciences.com/contact

Conditions: The information disclosed herein is not to be construed as a recommendation to use the above product in violation of any patents. BD Biosciences will not be held responsible for patent infringement or other violations that may occur with the use of our products. Purchase does not include or carry any right to resell or transfer this product either as a stand-alone product or as a component of another product. Any use of this product other than the permitted use without the express written authorization of Becton, Dickinson and Company is strictly prohibited.

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Not for resale.

Unless otherwise noted, BD, BD Logo and all other trademarks are property of Becton, Dickinson and Company. © 2011 BD



Kilshaw PJ, Murant SJ. Expression and regulation of beta 7(beta p) integrins on mouse lymphocytes: relevance to the mucosal immune system. *Eur J Immunol.* 1991; 21(10):2591-2597. (Clone-specific: Immunohistochemistry)
Kilshaw PJ, Murant SJ. A new surface antigen on intraepithelial lymphocytes in the intestine. *Eur J Immunol.* 1990; 20(10):2201-2207. (Biology)
Lefrancois L, Barrett TA, Havran WL, Puddington L. Developmental expression of the alpha IEL beta 7 integrin on T cell receptor gamma delta and T cell receptor alpha beta T cells. *Eur J Immunol.* 1994; 24(3):635-640. (Biology)
Roberts K, Kilshaw PJ. The mucosal T cell integrin alpha M290 beta 7 recognizes a ligand on mucosal epithelial cell lines. *Eur J Immunol.* 1993; 23(7):1630-1635. (Clone-specific: Blocking, (Co)-stimulation)

BD Biosciences

bdbiosciences.com

United States	Canada	Europe	Japan	Asia Pacific	Latin America/Caribbean
877.232.8995	800.979.9408	32.53.720.550	0120.8555.90	65.6861.0633	55.11.5185.9995

For country contact information, visit bdbiosciences.com/contact

Conditions: The information disclosed herein is not to be construed as a recommendation to use the above product in violation of any patents. BD Biosciences will not be held responsible for patent infringement or other violations that may occur with the use of our products. Purchase does not include or carry any right to resell or transfer this product either as a stand-alone product or as a component of another product. Any use of this product other than the permitted use without the express written authorization of Becton, Dickinson and Company is strictly prohibited.

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Not for resale.

Unless otherwise noted, BD, BD Logo and all other trademarks are property of Becton, Dickinson and Company. © 2011 BD

