



## CELL LAB Hamster Anti-Mouse CD103 (Integrin $\alpha$ IEL)

<u>Cat. No.</u>	<u>Form</u>	<u>Quantity</u>
732307	Purified (UNLB) Antibody	0.5 mg
732308	Fluorescein (FITC) Conjugate	0.5 mg
732309	Biotin (BIOT) Conjugate	0.5 mg
732310	Phycoerythrin (PE) Conjugate	0.1 mg

### For Laboratory Use Only

#### DESCRIPTION

**Clone:** 2E7  
**Isotype:** Armenian Hamster IgG  
**Specificity:** CD103/ $\alpha$ IEL $\beta$ 7 integrin complex (Mr 160 and 115 kDa peptides).

CD103 is a member of the integrin series of adhesion molecules. This antigen defines a developmentally important subset of T cells, namely mucosal T cells including all IEL (intraepithelial lymphocytes) and ~20% of lamina propria T cells. Expression of CD103 is more restricted outside these mucosal organs, appearing at lower levels on T cell subsets of the lymph node, dendritic epidermis and periphery.<sup>1-3</sup> In non-epithelial CD103<sup>+</sup> T cells there is a bias toward expression on CD8<sup>+</sup> cells. The 2E7 monoclonal antibody (MAb) exhibits antigen immunoprecipitation patterns similar, if not identical, to the rat anti-mouse CD103 MAb M290.<sup>1</sup> The 2E7 MAb is reported to have signal-inducing activity in a redirected lysis assay and to co-stimulate IEL and CD8<sup>+</sup> lymph node cells in conjunction with anti-TCR *in vitro*, which runs counter to the usual inhibition of CTL by anti-integrins.<sup>1</sup> This co-stimulatory activity is also shared by the MAb M290.<sup>4</sup> The property of co-stimulation is not unique to the mouse since the combination of anti-human  $\alpha$ <sub>IEL</sub> plus anti-TCR will produce similar proliferation in human cells, with the exception that CD8<sup>+</sup> cells are not stimulated.<sup>5</sup>

#### APPLICATIONS

- Identification and enumeration of CD103<sup>+</sup> cells by flow cytometry<sup>1</sup>
- Immunohistochemistry (acetone-fixed, frozen tissue sections)<sup>1</sup>
- Immunoprecipitation<sup>1</sup>
- *In vitro* activation<sup>1</sup>

#### CHARACTERIZATION

To ensure lot-to-lot consistency, each batch of product is tested to conform with characteristics of a standard reference reagent using immunofluorescence staining and flow cytometry.

#### WORKING DILUTIONS

**Flow Cytometry:**

FITC conjugate	$\leq 1 \mu\text{g}/10^6$ cells
BIOT conjugate	$\leq 1 \mu\text{g}/10^6$ cells
PE conjugate	$\leq 0.2 \mu\text{g}/10^6$ cells

**Other Applications:** Since applications vary, determine the optimum working dilution of the product that is appropriate for your specific needs.

#### HANDLING AND STORAGE

- The purified (UNLB) antibody is supplied as 0.5 mg of purified immunoglobulin in 1.0 mL of 100 mM borate buffered saline, pH 8.0. No preservatives or amine-containing buffer salts added.
- The fluorescein (FITC) conjugate is supplied as 0.5 mg in 1.0 mL of PBS/NaN<sub>3</sub>.
- The biotin (BIOT) conjugate is supplied as 0.5 mg in 1.0 mL of PBS/NaN<sub>3</sub>.
- The phycoerythrin (PE) conjugate is supplied as 0.1 mg in 1.0 mL of PBS/NaN<sub>3</sub> and a stabilizing agent.
- Protect fluorochrome-conjugated forms from light. Do not freeze.
- Reagent is stable until the expiration date on the vial when stored at 2-8°C.

## STATEMENT OF WARNINGS

1. Specimens, samples and all material coming in contact with them should be handled as if capable of transmitting infection and disposed of with proper precautions.
2. Never pipet by mouth and avoid contact of samples with skin and mucous membranes.
3. Do not use reagent beyond the expiration date on the vial label.
4. Minimize exposure of reagent to light during storage or incubation.
5. Avoid microbial contamination of reagent or erroneous results may occur.
6. Use Good Laboratory Practice (GLP) when handling this reagent.
7. Harmful if swallowed.
8. After contact with skin, wash immediately with plenty of water.
9. Contains sodium azide. Sodium azide under acidic conditions yields hydrazoic acid, an extremely toxic compound. Azide compounds should be flushed with running water while being discarded. These precautions are recommended to avoid deposits in metal piping in which explosive conditions can develop. If skin or eye contact occurs, immediately wash excessively with water.

## TRADEMARKS

The Beckman Coulter logo is a trademark of Beckman Coulter, Inc.

For additional information or if damaged product is received, contact your local Beckman Coulter Representative.

## REFERENCES

1. Lefrancois L, Barrett TA, Havran WL and Puddington L. 1994. 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*, 24:635-640.
2. Lefrancois L. 1991. Extrathymic differentiation of intraepithelial lymphocytes: generation of a separate and unequal T-cell repertoire? *Immunol Today*, 12:436-438.
3. Reimann J and Rudolphi A. 1995. Co-expression of CD8 alpha in CD4+ T cell receptor alpha beta + T cells migrating into the murine small intestine epithelial layer. *Eur J Immunol*, 25:1580-1588.
4. Roberts K and Kilshaw PJ. 1993. The mucosal T cell integrin alpha M290 beta 7 recognizes a ligand on mucosal epithelial cell lines. *Eur J Immunol*, 23:1630-1635.
5. Cerf-Bensussan N, Begue B, Gagnon J and Meo T. 1992. The human intraepithelial lymphocyte marker HML-1 is an integrin consisting of a beta 7 subunit associated with a distinctive alpha chain. *Eur J Immunol*, 22:273-277.



Manufactured for:  
 Beckman Coulter, Inc.  
 4300 N. Harbor Blvd.  
 Fullerton, CA 92835  
[www.beckmancoulter.com](http://www.beckmancoulter.com)

Printed in USA  
 Made in USA

© 2005 Beckman Coulter, Inc.  
 All Rights Reserved.

PN 733968-A