Technical Data Sheet

PE Hamster Anti-Mouse CD103

Product Information

Material Number: 566844
Alternate Name: Itgae; integrin alpha-E; Integrin αIEL chain; αE; alpha-E1
Size: 0.1 mg
Concentration: 0.2 mg/ml
Clone: 2E7
Immunogen: Mouse intestinal intraepithelial lymphocytes
Isotype: Armenian Hamster IgG2, κ
Reactivity: QC Testing: Mouse
Storage Buffer: Aqueous buffered solution containing ≤0.09% sodium azide.

Description

The 2E7 monoclonal antibody specifically recognizes CD103 which is also known as the α chain of the heterodimeric αIELβ7 (also known as, αEβ7) integrin. CD103 is a type I transmembrane glycoprotein that is encoded by Itgae (integrin alpha E, epithelial-associated). CD103 has a unique and fairly restricted tissue distribution. It is expressed on almost all intestinal intraepithelial lymphocytes (IEL), dendritic epidermal T cells (DEC), subsets of peripheral T cells, and distinct subsets of fetal, neonatal, and adult thymocytes. E-cadherin is the epithelial cell ligand for αIELβ7 integrin. The ordered expression of αIEL during thymocyte development (which occurs under the influence of the thymic epithelium), high level of αIEL expression on peripheral T cells in epithelial tissues (IEL and DEC), and expression of CD103 on a subset of CD8+ lymphocytes responding to allogeneic epithelial cells, suggest that αIELβ7 integrin has 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 2E7 antibody recognizes a different epitope than that recognized by the M290 antibody. Ligation of CD103 by 2E7 reportedly induces intracellular signaling activity in a redirected lysis assay and can costimulate anti-TCR antibody-activated IEL and CD8+ T cells. The 2E7 hamster antibody does not crossreact with rat leucocytes.

Preparation and Storage

Store undiluted at 4°C and protected from prolonged exposure to light. Do not freeze.

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

The antibody was conjugated with R-PE under optimum conditions, and unconjugated antibody and free PE were removed.

BD Biosciences

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Application Notes

Application Flow cytometry Routinely Tested

Suggested Companion Products

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Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. An isotype control should be used at the same concentration as the antibody of interest.
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. For fluorochrome spectra and suitable instrument settings, please refer to our Multicolor Flow Cytometry web page at www.bdbiosciences.com/colors.
5. Please refer to http://rgd.docs.bd.com to access safety data sheets (SDS).
6. 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/documents/hamster_chart_11x17.pdf.

References


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):748-3756. (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. (Biology)