

## TECHNICAL DATA SHEET

### **CyFlow™ CD103 FITC** **Anti-Hu; Clone Ber-ACT8**

**REF** BB687833

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

### Specifications

|                                    |                                         |
|------------------------------------|-----------------------------------------|
| <b>Antigen</b>                     | CD103                                   |
| <b>Alternative Names</b>           | HML-1, Integrin αE-subunit              |
| <b>Clone</b>                       | Ber-ACT8                                |
| <b>Clonality</b>                   | monoclonal                              |
| <b>Format</b>                      | FITC                                    |
| <b>Host / Isotype</b>              | Mouse / IgG1                            |
| <b>Species Reactivity</b>          | Human, Non-Human Primates               |
| <b>Negative Species Reactivity</b> | —                                       |
| <b>Quantity</b>                    | 100 tests                               |
| <b>Immunogen</b>                   | HTLV-1 induced human T cell line MAPS16 |

### Specificity

The mouse monoclonal antibody Ber-ACT8 recognizes CD103 antigen, a type I transmembrane glycoprotein primarily found on intestinal intraepithelial lymphocytes.

#### Contact Information:

Sysmex Partec GmbH • Am Flugplatz 13 • 02828 Görlitz • Germany  
Tel +49 3581 8746 0 • Fax +49 3581 8746 70 • E-mail: [info@sysmex-partec.com](mailto:info@sysmex-partec.com)

## Application

The reagent is designed for Flow Cytometry analysis of human blood cells. Recommended usage is 4 µl reagent / 100 µl of whole blood or 10<sup>6</sup> cells in a suspension. The content of a vial (0.4 ml) is sufficient for 100 tests.

Other usages may be determined from the scientific literature.

## Storage Buffer

The reagent is provided in stabilizing phosphate buffered saline (PBS) solution, pH ≈7.4, containing 0.1% (w/v) sodium azide.

## Storage and Stability

|                  |                                                                               |
|------------------|-------------------------------------------------------------------------------|
| <b>Storage</b>   | Avoid prolonged exposure to light. Store in the dark at 2-8°C. Do not freeze. |
| <b>Stability</b> | Do not use after expiration date stamped on vial label.                       |

## Background Information

CD103 (Integrin αE) is an integrin subunit that is expressed on intraepithelial lymphocytes, epithelial dendritic cells, lamina propria-derived dendritic cells, a subpopulation of lamina propria T cells, a small subset of peripheral lymphocytes, namely T reg cells, and on activated and TGF-β stimulated lymphocytes. CD103 is in mature form cleaved into two disulfide-linked chains (C-terminal 150 kDa chain and N-terminal 25 kDa chain). It heterodimerizes with integrin β7 subunit to form αE/β7 integrin (mucosal lymphocyte 1 antigen), which through binding E-cadherin mediates homing of lymphocytes to the intestinal epithelium, and, in addition to the role in adhesion, may serve as an accessory molecule for intraepithelial lymphocyte activation.

## References

- French JJ, Cresswell J, Wong WK, Seymour K, Charnley RM, Kirby JA: T cell adhesion and cytolysis of pancreatic cancer cells: a role for E-cadherin in immunotherapy?. Br J Cancer. 2002 Oct 21; 87(9):1034-41. < PMID: 12434297 >
- Poles MA, Barsoum S, Yu W, Yu J, Sun P, Daly J, He T, Mehandru S, Talal A, Markowitz M, Hurley A, Ho D, Zhang L: Human immunodeficiency virus type 1 induces persistent changes in mucosal and blood gammadelta T cells despite suppressive therapy. J Virol. 2003 Oct; 77(19):10456-67. < PMID: 12970431 >

---

### Contact Information:

Sysmex Partec GmbH • Am Flugplatz 13 • 02828 Görlitz • Germany  
Tel +49 3581 8746 0 • Fax +49 3581 8746 70 • E-mail: [info@sysmex-partec.com](mailto:info@sysmex-partec.com)

- Brandes M, Willimann K, Lang AB, Nam KH, Jin C, Brenner MB, Morita CT, Moser B: Flexible migration program regulates gamma delta T-cell involvement in humoral immunity. *Blood*. 2003 Nov 15; 102(10):3693-701. < PMID: 12881309 >
- León F, Roy G: Isolation of human small bowel intraepithelial lymphocytes by annexin V-coated magnetic beads. *Lab Invest*. 2004 Jun; 84(6):804-9. < PMID: 15154017 >
- Sigmundsdottir H, Johnston A, Gudjonsson JE, Bjarnason B, Valdimarsson H: Methotrexate markedly reduces the expression of vascular E-selectin, cutaneous lymphocyte-associated antigen and the numbers of mononuclear leucocytes in psoriatic skin. *Exp Dermatol*. 2004 Jul; 13(7):426-34. < PMID: 15217363 >
- Cardoso CR, Garlet GP, Moreira AP, Júnior WM, Rossi MA, Silva JS: Characterization of CD4+CD25+ natural regulatory T cells in the inflammatory infiltrate of human chronic periodontitis. *J Leukoc Biol*. 2008 Jul; 84(1):311-8. < PMID: 18451325 >
- Jaensson E, Uronen-Hansson H, Pabst O, Eksteen B, Tian J, Coombes JL, Berg PL, Davidsson T, Powrie F, Johansson-Lindbom B, Agace WW: Small intestinal CD103+ dendritic cells display unique functional properties that are conserved between mice and humans. *J Exp Med*. 2008 Sep 1; 205(9):2139-49. < PMID: 18710932 >
- Kost CB, Holden JT, Mann KP: Marginal zone B-cell lymphoma: a retrospective immunophenotypic analysis. *Cytometry B Clin Cytom*. 2008 Sep; 74(5):282-6. < PMID: 18500740 >
- Kost CB, Holden JT, Mann KP: Marginal zone B-cell lymphoma: a retrospective immunophenotypic analysis. *Cytometry B Clin Cytom*. 2008 Sep; 74(5):282-6. < PMID: 18500740 >
- Zhang L, Bertucci AM, Ramsey-Goldman R, Burt RK, Datta SK: Regulatory T cell (Treg) subsets return in patients with refractory lupus following stem cell transplantation, and TGF-beta-producing CD8+ Treg cells are associated with immunological remission of lupus. *J Immunol*. 2009 Nov 15; 183(10):6346-58. < PMID: 19841178 >

---

The Safety Data Sheet for this product is available at [www.sysmex-partec.com/services](http://www.sysmex-partec.com/services).

---

---

**Contact Information:**

Sysmex Partec GmbH • Am Flugplatz 13 • 02828 Görlitz • Germany  
Tel +49 3581 8746 0 • Fax +49 3581 8746 70 • E-mail: [info@sysmex-partec.com](mailto:info@sysmex-partec.com)