

**Alexa Fluor® 647 anti-human CD103 (Integrin αE)**

**Catalog # / Size:** 2351045 / 25 tests  
2351050 / 100 tests

**Clone:** Ber-ACT8

**Isotype:** Mouse IgG1, κ

**Immunogen:** HTLV-1 induced human T cell line MAPS16

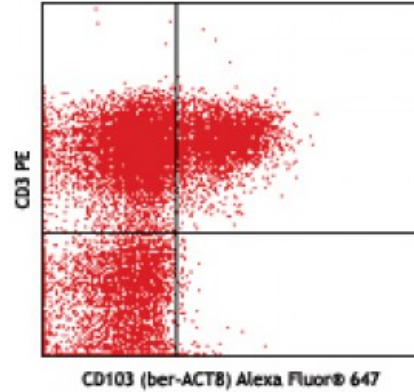
**Reactivity:** Human

**Preparation:** The antibody was purified by affinity chromatography, and conjugated with Alexa Fluor® 647 under optimal conditions.

**Formulation:** Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide and 0.2% (w/v) BSA (origin USA).

**Workshop Number:** V A067

**Concentration:** Lot-specific

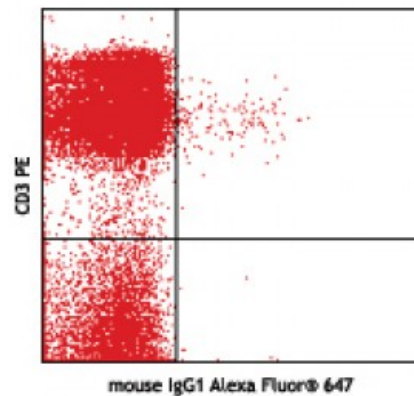


PHA-stimulated (3day) human peripheral blood mononuclear cells stained with CD103 (Ber-ACT8) Alexa Fluor® 647 and CD3 PE

**Applications:**

**Applications:** Flow Cytometry

**Recommended Usage:** Each lot of this antibody is quality control tested by immunofluorescent staining with flow cytometric analysis. For flow cytometric staining, the suggested use of this reagent is 5 microL per million cells or 5 microL per 100 microL of whole blood. It is recommended that the reagent be titrated for optimal performance for each application.



Human peripheral blood mononuclear cells stained with mouse IgG1, κ Alexa Fluor® 647 isotype control and CD3 PE

\* Alexa Fluor® 647 has a maximum emission of 668 nm when it is excited at 633 nm / 635 nm.

**Application Notes:** Additional reported applications (for the relevant formats) include: Western Blotting<sup>1</sup>, immunoprecipitation<sup>1</sup>, and immunohistochemical staining of frozen tissue sections<sup>1</sup>.

**Application References:** 1. Kruschwitz M, *et al.* 1991. *J. Clin. Pathol.* 44:636. (WB, IP, IHC)  
2. Yoshino N, *et al.* 2000. *Exp. Anim. (Tokyo)* 49:97. (FC)

**Description:** CD103 is a type I transmembrane glycoprotein also known as αE integrin, integrin αIEL chain, and human mucosal lymphocyte antigen 1. It belongs to the integrin family and is primarily found on intestinal intraepithelial lymphocytes (IEL). CD103 is also expressed on a subpopulation of lamina propria T cells, epithelial dendritic cells, lamina propria-derived dendritic cells, and a small subset of peripheral lymphocytes. Treg cells express high level of CD103. Hairy cell leukemia has also

been shown to express CD103. The expression of CD103 on lymphocytes can be induced upon activation and TGF- $\beta$  stimulation. In association with integrin  $\beta$ 7, CD103 is expressed as an  $\alpha$ E/ $\beta$ 7 heterodimer. Mature CD103 protein can be cleaved into 2 chains, a 150 kD (C-terminal) chain and a 25 kD (N-terminal) chain, which remain linked by disulfide bonds. CD103 binds to E-cadherin and mediates homing of lymphocytes to the intestinal epithelium.

**Antigen  
References:**

1. Parker CM, *et al.* 1992. *P. Natl. Acad. Sci. USA* 89:1924.
2. Kruschwitz M, *et al.* 1991. *J. Clin. Pathol.* 44:636.
3. Schon MP, *et al.* 1999. *J. Immunol.* 162:6641.
4. Shaw SK, *e*