

**Brilliant Violet 421™ anti-human CD103 (Integrin αE)**

**Catalog # / Size:** 2351070 / 100 tests  
2351065 / 25 tests

**Clone:** Ber-ACT8

**Isotype:** Mouse IgG1, κ

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

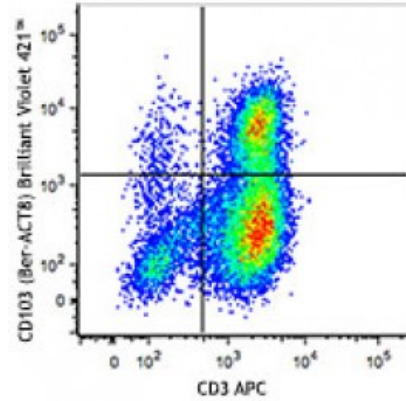
**Reactivity:** Human

**Preparation:** The antibody was purified by affinity chromatography and conjugated with Brilliant Violet 421™ under optimal conditions. The solution is free of unconjugated Brilliant Violet 421™ and unconjugated antibody.

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

**Workshop Number:** V A067

**Concentration:** Lot-specific

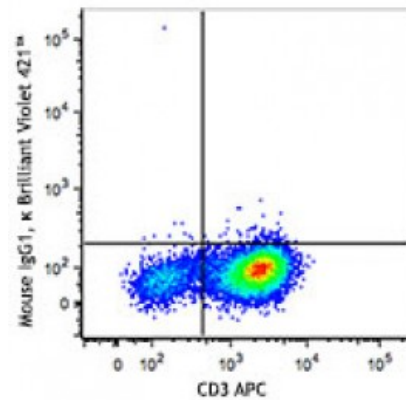


PHA-stimulated (3 days) human peripheral blood lymphocytes stained with CD3 APC and CD103 (Ber-ACT8) Brilliant Violet 421™ (top) or mouse IgG1, κ Brilliant Violet 421™ isotype control (Bottom).

**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.



Brilliant Violet 421™ excites at 405 nm and emits at 421 nm. The standard bandpass filter 450/50 nm is recommended for detection. Brilliant Violet 421™ is a trademark of Sirigen Group Ltd.

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U.S. Patent(s), pending patent applications and foreign equivalents.

**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)

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**Description:** CD103 is a type I transmembrane glycoprotein also known as  $\alpha$ E integrin, integrin  $\alpha$ EL 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*