SONY

# Product Data Sheet

## Brilliant Violet 605™ anti-mouse CD103

**Catalog # / Size:** 1207165 / 50 µg

**Clone:** 2E7

**Isotype:** Hamster IgG

**Immunogen:** Mouse intestinal intraepithelial lymphocytes

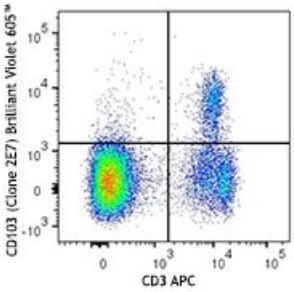
**Reactivity:** Mouse

**Preparation:** The antibody was purified by affinity chromatography and conjugated with Brilliant Violet 605™ under optimal conditions.

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

**Workshop Number:** 750 under optimal conditions.

**Concentration:** 0.2




C57BL/6 mouse splenocytes were stained with CD3 APC and CD103 (clone 2E7) Brilliant Violet 605™ (top) or Armenian hamster IgG Brilliant Violet 605™ isotype control (bottom).

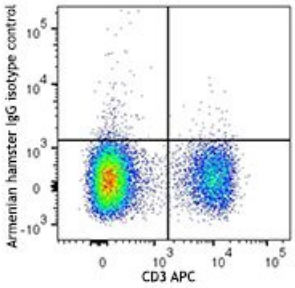
## Applications:

**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 ≤0.5 µg per million cells in 100 µl volume. It is recommended that the reagent be titrated for optimal performance for each application.

Brilliant Violet 605™ excites at 405 nm and emits at 603 nm. The bandpass filter 610/20 nm is recommended for detection, although filter optimization may be required depending on other fluorophores used. **Be sure to verify that your cytometer configuration and software setup are appropriate for detecting this channel.** Refer to your instrument manual or manufacturer for support. Brilliant Violet 605™ is a trademark of Sirigen Group Ltd.

**Application Notes:** Additional reported applications (for the relevant formats) include: immunoprecipitation1, immunohistochemical staining[1,7] of acetone-fixed frozen sections, immunofluorescence2, and *in vitro* activation1.




For research use only. Not for diagnostic use. Not for resale. Sony Biotechnology Inc. will not be held responsible for patent infringement or other violations that may occur with the use of our products.
Sony Biotechnology Inc. 1730 North First Street, San Jose, CA 95112 www.sonybiotechnology.com

**Application References:**


1. LeFrancois L, *et. al,* 1994. *Eur. J. Immunol.* 24:635. (FC, IHC, IP)
2. Mysorekar IU, *et. al,* 2002. *J. Biol. Chem.* 277:37811. (FC, IF)
3. Mikami N, *et al.* 2011. *J. Immunol.* 186:6886. PubMed
4. del Rio ML, *et al.* 2011. *Transpl. Int.* 24:501. (FC) PubMed
5. Quinn KM, *et al.* 2013. *J. Immunol.* 191:5085. PubMed
6. Verhagen J and Wraith DC. 2014. *J. Immunol. Methods.* S0022. (FC) PubMed
7. Xiao B, *et al.* 2015. *PLoS One* 1:e0115333. (IHC)


---

**Description:** CD103 is a type I transmembrane glycoprotein known as αE integrin or Integrin $\alpha_{IEL}$ chain. 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. T regulatory cells express high level of CD103. The CD103 expression on lymphocytes can be induced upon activation and TGF-β stimulation. In association with integrin $\beta_7$, CD103 is expressed as $\alpha E/\beta_7$ 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. Kilshaw PJ and SJ. Murant. 1990. *Eur. J. Immunol.* 20:2201.
2. Karecla PI, *et al.* 1995. *Eur. J. Immunol.* 25:852.
3. LeFrancois L, *et al.* 1994. *Eur. J. Immunol.* 24:635.
4. Sung SS, *et al.* 2006. *J. Immunol.* 176:2161.
5. Johansson-Lindbom B, *et al.* 2005. *J. Exp. Med.* 202:1063.
6. Dujardin HC, *et al.* 2004. *Proc. Natl. Acad. Sci. USA.* 101:14473.



For research use only. Not for diagnostic use. Not for resale. Sony Biotechnology Inc. will not be held responsible for patent infringement or other violations that may occur with the use of our products.