

Spark Red™ 718 anti-mouse CD103 Antibody

Catalog# / Size	121451 / 25 µg 121452 / 100 µg
Clone	2E7
Regulatory Status	RUO
Other Names	Integrin αIEL chain, Integrin αE chain, αE integrin, ITGAE
Isotype	Armenian Hamster IgG
Description	CD103 is a type I transmembrane glycoprotein known as αE integrin or Integrin α _{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 β ₇ , CD103 is expressed as αE/β 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.

Product Details

Verified Reactivity	Mouse
Antibody Type	Monoclonal
Host Species	Armenian Hamster
Immunogen	Mouse intestinal intraepithelial lymphocytes
Formulation	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide
Preparation	The antibody was purified by affinity chromatography and conjugated with Spark Red™ 718 under optimal conditions.
Concentration	0.5 mg/mL
Storage & Handling	The antibody solution should be stored undiluted between 2°C and 8°C, and protected from prolonged exposure to light. Do not freeze.
Application	FC - Quality tested
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 ≤ 1.0 µg per million cells in 100 µL volume. It is recommended that the reagent be titrated for optimal performance for each application. * Spark Red™ 718 has a maximum excitation of 697 nm and a maximum emission of 711 nm.
Excitation Laser	Red Laser (633 nm)
Application Notes	Additional reported applications (for the relevant formats) include: immunoprecipitation ¹ , immunohistochemical staining ^{1,7} of acetone-fixed frozen sections, immunofluorescence ² , and <i>in vitro</i> activation ¹ .

Application References

(PubMed link indicates
BioLegend citation)

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)

Antigen Details

Structure	Type I transmembrane glycoprotein, Integrin family, can be cleaved into 150 kD and 25 kD chains, associated with β_7 integrin
Distribution	Majority of intestinal intraepithelial lymphocytes (IEL), subpopulation of lamina propria T cells, epithelial dendritic cells, small subset of peripheral lymphocytes, Treg cells.
Function	Retention and activation of CD103 ⁺ lymphocytes in the intestinal epithelium, regulate tissue-specific T cell homing.
Ligand/Receptor	E-Cadherin
Cell Type	Dendritic cells, Lymphocytes, T cells, Tregs
Biology Area	Immunology
Molecular Family	Adhesion Molecules, CD Molecules
Antigen References	1. Kilshaw PJ and SJ. Murant. 1990. <i>Eur. J. Immunol.</i> 20:2201. 2. Karecla PI, <i>et al.</i> 1995. <i>Eur. J. Immunol.</i> 25:852. 3. LeFrancois L, <i>et al.</i> 1994. <i>Eur. J. Immunol.</i> 24:635. 4. Sung SS, <i>et al.</i> 2006. <i>J. Immunol.</i> 176:2161. 5. Johansson-Lindbom B, <i>et al.</i> 2005. <i>J. Exp. Med.</i> 202:1063. 6. Dujardin HC, <i>et al.</i> 2004. <i>Proc. Natl. Acad. Sci. USA.</i> 101:14473.
Gene ID	16407

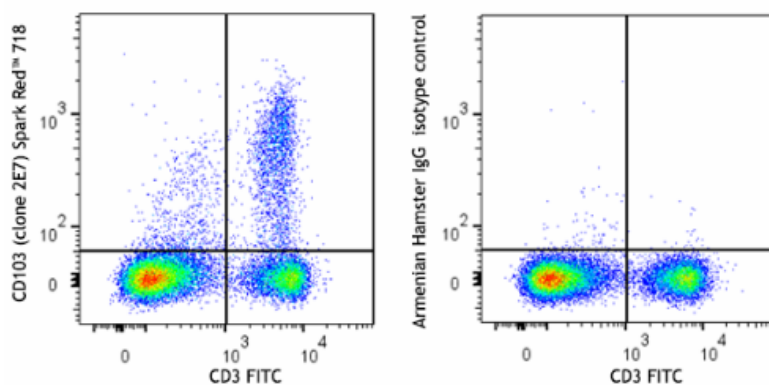
Related Protocols

- [Cell Surface Flow Cytometry Staining Protocol](#)

Other Formats

PE/Cyanine5 anti-mouse CD103, Alexa Fluor® 594 anti-mouse CD103, APC/Cyanine7 anti-mouse CD103, Brilliant Violet 605™ anti-mouse CD103, PE/Dazzle™ 594 anti-mouse CD103, APC anti-mouse CD103, Pacific Blue™ anti-mouse CD103, PerCP/Cyanine5.5 anti-mouse CD103, Brilliant Violet 421™ anti-mouse CD103, Brilliant Violet 510™ anti-mouse CD103, Brilliant Violet 750™ anti-mouse CD103, Spark YG™ 581 anti-mouse CD103 (Flexi-Fluor™), Spark NIR™ 685 anti-mouse CD103 (Flexi-Fluor™), PE anti-mouse CD103, Alexa Fluor® 488 anti-mouse CD103, Alexa Fluor® 647 anti-mouse CD103, Brilliant Violet 785™ anti-mouse CD103, Alexa Fluor® 700 anti-mouse CD103, Brilliant Violet 711™ anti-mouse CD103, TotalSeq™-C0201 anti-mouse CD103, Purified anti-mouse CD103, Biotin anti-mouse CD103, FITC anti-mouse CD103, PE/Cyanine7 anti-mouse CD103, Spark YG™ 593 anti-mouse CD103 (Flexi-Fluor™), Spark Red™ 718 anti-mouse CD103, TotalSeq™-A0201 anti-mouse CD103, TotalSeq™-B0201 anti-mouse CD103

Product Data



C57BL/6 mouse splenocytes were stained with anti-mouse CD3 (clone 17A2) FITC and anti-mouse CD103 (clone 2E7) Spark Red™ 718 (left) or Armenian Hamster IgG Spark Red™ 718 isotype control (right).

For Research Use Only. Not for diagnostic or therapeutic use.

This product is supplied subject to the terms and conditions, including the limited license, located at www.biolegend.com/terms ("Terms") and may be used only as provided in the Terms. Without limiting the foregoing, BioLegend products may not be used for any Commercial Purpose as defined in the Terms, resold in any form, used in manufacturing, or reverse engineered, sequenced, or otherwise studied or used to learn its design or composition without express written approval of BioLegend. Regardless of the information given in this document, user is solely responsible for determining any license requirements necessary for user's intended use and assumes all risk and liability arising from use of the product. BioLegend is not responsible for patent infringement or any other risks or liabilities whatsoever resulting from the use of its products.

BioLegend, the BioLegend logo, and all other trademarks are property of BioLegend, Inc. or their respective owners, and all rights are reserved.

8999 BioLegend Way, San Diego, CA 92121 www.biolegend.com
Toll-Free Phone: 1-877-Bio-Legend (246-5343) Phone: (858) 768-5800 Fax: (877) 455-9587