

Purified anti-human CD103 (Integrin α E) Antibody

Catalog# / Size	350202 / 100 μ g
Clone	Ber-ACT8
Regulatory Status	RUO
Workshop	V A067
Other Names	Integrin alpha E (ITGAE)
Isotype	Mouse IgG1, κ
Description	CD103 is a type I transmembrane glycoprotein also known as α E integrin, integrin α 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- β stimulation. In association with integrin β 7, CD103 is expressed as an α E/ 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	Human
Reported Reactivity	Cynomolgus
Antibody Type	Monoclonal
Host Species	Mouse
Immunogen	HTLV-1 induced human T cell line MAPS16
Formulation	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide.
Preparation	The antibody was purified by affinity chromatography.
Concentration	0.5 mg/mL
Storage & Handling	The antibody solution should be stored undiluted between 2°C and 8°C.
Application	FC - Quality tested WB, IP, IHC-F - Reported in the literature, not verified in house
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 \leq 0.5 μ g per million cells in 100 μ L volume. It is recommended that the reagent be titrated for optimal performance for each application.
Application Notes	Additional reported applications (for the relevant formats) include: Western Blotting ¹ , immunoprecipitation ¹ , and immunohistochemical staining of frozen tissue sections ¹ .
Application References (PubMed link indicates BioLegend citation)	1. Kruschwitz M, <i>et al.</i> 1991. <i>J. Clin. Pathol.</i> 44:636. (WB, IP, IHC-F) 2. Yoshino N, <i>et al.</i> 2000. <i>Exp. Anim. (Tokyo)</i> 49:97. (FC)
Product Citations	1. Stras SF, <i>et al.</i> 2020. <i>Developmental Cell.</i> 51(3):357-373.e5.. PubMed 2. Gide TN, <i>et al.</i> 2019. <i>Cancer Cell.</i> 35:238. PubMed 3. O'Boyle KC, <i>et al.</i> 2020. <i>Methods Mol Biol.</i> 2111:1. PubMed 4. Martin JC, <i>et al.</i> 2020. <i>Cell.</i> 178(6):1493-1508.e20.. PubMed 5. Gruber CN, <i>et al.</i> 2020. <i>Cell.</i> 183:982. PubMed

6. van Montfoort N, *et al.* 2018. *Cell*. 175:1744. [PubMed](#)
7. Cosgrove PR, *et al.* 2021. *Pediatr Res.* . [PubMed](#)
8. Sattler A, *et al.* 2021. *Am J Transplant*. 21:87. [PubMed](#)
9. Gee MH, *et al.* 2018. *Cell*. 172:549. [PubMed](#)
10. Ardain A, *et al.* 2019. *Nature*. 570:528. [PubMed](#)
11. Schwabenland M, *et al.* 2021. *Immunity.* . [PubMed](#)
12. Matos TR, *et al.* 2017. *J Clin Invest*. 127:4031. [PubMed](#)

RRID AB_10639864 (BioLegend Cat. No. 350202)

Antigen Details

Structure	Type I transmembrane glycoprotein, integrin family; can be cleaved into 150 kD and 25 kD chains; associated with $\beta 7$ integrin
Distribution	Majority of intestinal intraepithelial lymphocytes (IEL), subpopulation of lamina propria T cells, epithelial dendritic cells, small subset of peripheral lymphocytes, Treg cells; expressed on hairy cell leukemia
Function	Retention and activation of CD103 ⁺ lymphocytes in the intestinal epithelium, regulation of tissue-specific T cell homing
Ligand/Receptor	E-Cadherin
Cell Targets	Integrin $\beta 7$
Cell Type	Dendritic cells, Lymphocytes, T cells, Tregs
Biology Area	Cell Biology, Immunology, Neuroscience, Synaptic Biology
Molecular Family	Adhesion Molecules, CD Molecules
Antigen References	<ol style="list-style-type: none"> 1. Parker CM, <i>et al.</i> 1992. <i>P. Natl. Acad. Sci. USA</i> 89:1924. 2. Kruschwitz M, <i>et al.</i> 1991. <i>J. Clin. Pathol.</i> 44:636. 3. Schon MP, <i>et al.</i> 1999. <i>J. Immunol.</i> 162:6641. 4. Shaw SK, <i>et al.</i> 1994. <i>J. Biol. Chem.</i> 269:6016.
Gene ID	3682

Related Protocols

[Cell Surface Flow Cytometry Staining Protocol](#)

Other Formats

Purified anti-human CD103 (Integrin αE), FITC anti-human CD103 (Integrin αE), PE anti-human CD103 (Integrin αE), Alexa Fluor® 488 anti-human CD103 (Integrin αE), Alexa Fluor® 647 anti-human CD103 (Integrin αE), PE/Cyanine7 anti-human CD103 (Integrin αE), Brilliant Violet 421™ anti-human CD103 (Integrin αE), APC anti-human CD103 (Integrin αE), Brilliant Violet 605™ anti-human CD103 (Integrin αE), Biotin anti-human CD103 (Integrin αE), APC anti-human CD103 (Integrin αE), Brilliant Violet 711™ anti-human CD103 (Integrin αE), PE/Dazzle™ 594 anti-human CD103 (Integrin αE), PerCP/Cyanine5.5 anti-human CD103 (Integrin αE), Brilliant Violet 785™ anti-human CD103 (Integrin αE), APC/Cyanine7 anti-human CD103 (Integrin αE), TotalSeq™-A0145 anti-human CD103 (Integrin αE), TotalSeq™-C0145 anti-human CD103 (Integrin αE), TotalSeq™-B0145 anti-human CD103 (Integrin αE), APC/Fire™ 750 anti-human CD103 (Integrin αE), PE/Fire™ 700 anti-human CD103 (Integrin αE) Antibody, TotalSeq™-D0145 anti-human CD103 (Integrin αE), PE/Fire™ 640 anti-human CD103 (Integrin αE)

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