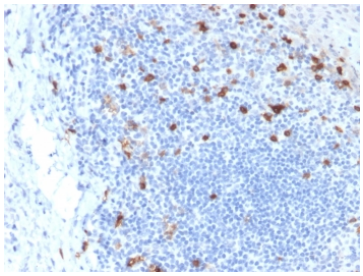
CD103 Antibody ITGAE/2063 / Integrin Alpha E Monoclonal Antibody [clone ITGAE/2063] (V3848)

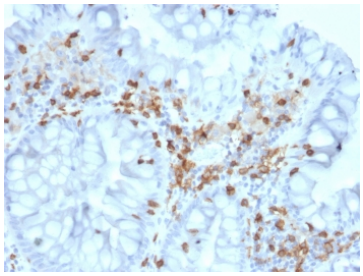
Catalog No.	Formulation	Size
V3848-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	100 ug
V3848-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	20 ug
V3848SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

Bulk quote request

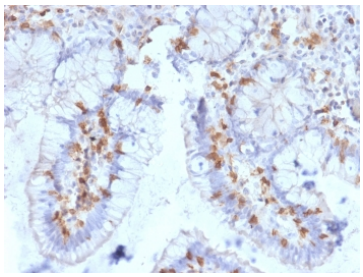
Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG2c, kappa
Clone Name	ITGAE/2063
Purity	Protein G affinity chromatography
UniProt	P38570
Localization	Cell membrane, cytoplasm
Applications	Immunohistochemistry (FFPE): 1-2ug/ml for 30 min at RT
Limitations	This CD103 Antibody ITGAE/2063 / Integrin Alpha E Monoclonal Antibody is available for research use only.



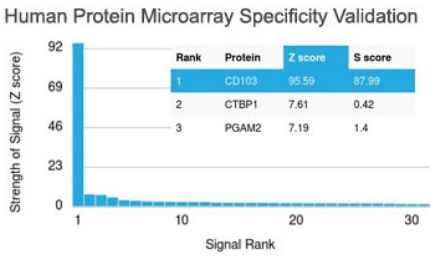
CD103 Antibody ITGAE/2063 Staining in Human Tonsil by IHC. Immunohistochemistry of FFPE human tonsil tissue using CD103 Antibody (clone ITGAE/2063) shows strong brown staining in scattered lymphoid cells distributed throughout the tissue, with numerous positive cells concentrated around portions of the lymphoid compartment. The staining is predominantly cellular and contrasts clearly with the densely packed hematoxylin-counterstained nuclei. Heat-induced epitope retrieval was performed by boiling sections in pH 6, 10 mM citrate buffer for 10-20 min followed by cooling at RT for 20 min. This pattern demonstrates detection of CD103-positive lymphocytes using this Integrin Alpha E Monoclonal Antibody.



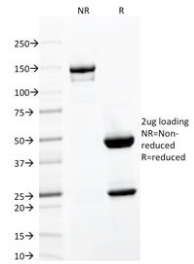
CD103 Antibody ITGAE/2063 Staining in Human Colon by IHC. Immunohistochemistry of FFPE human colon tissue using CD103 Antibody (clone ITGAE/2063) shows prominent brown staining in numerous cells within the mucosal compartment, particularly among cells surrounding and between the colonic glands. The glandular epithelial cells are comparatively lightly stained, producing clear contrast with the CD103-positive cellular population. Heat-induced epitope retrieval was performed by boiling sections in pH 6, 10 mM citrate buffer for 10-20 min followed by cooling at RT for 20 min. The distribution is consistent with detection of mucosal lymphocytes using this Integrin Alpha E Monoclonal Antibody.



CD103 Antibody ITGAE/2063 Staining in Human Small Intestine by IHC. Immunohistochemistry of FFPE human small intestine tissue using CD103 Antibody (clone ITGAE/2063) shows distinct brown staining in scattered cells associated with the intestinal mucosa, including cells positioned around and between epithelial structures. The heterogeneous cellular distribution is consistent with the known localization of CD103-expressing mucosal lymphocytes. Heat-induced epitope retrieval was performed by boiling sections in pH 6, 10 mM citrate buffer for 10-20 min followed by cooling at RT for 20 min. This mucosal staining demonstrates detection of CD103-positive cells using this Integrin Alpha E Monoclonal Antibody.



CD103 Antibody ITGAE/2063 Protein Microarray Validated. HuProt protein microarray analysis containing more than 19,000 full-length human proteins demonstrates highly selective recognition of CD103 by CD103 Antibody (clone ITGAE/2063). CD103 ranks first with a Z-score of 95.59, compared with 7.61 for the next-ranked protein, CTBP1, producing an S-score of 87.99. The Z-score represents signal strength in standard deviations above the array mean, while the S-score measures separation from the next-ranked protein. The exceptionally large separation between CD103 and all other proteins provides strong evidence of target specificity for this Integrin Alpha E Monoclonal Antibody.



CD103 Antibody ITGAE/2063 Purity and Integrity by SDS-PAGE. SDS-PAGE analysis of purified, BSA-free CD103 Antibody (clone ITGAE/2063) shows a predominant intact immunoglobulin band at approximately 150 kDa under non-reducing conditions and the expected heavy and light chains at approximately 50 kDa and 25 kDa under reducing conditions. Two micrograms of antibody were loaded per lane. The limited additional staining and expected migration profiles support the integrity and purity of the preparation of this Integrin Alpha E Monoclonal Antibody.

Description

CD103 Antibody ITGAE/2063 recognizes CD103, a cell-surface glycoprotein encoded by the ITGAE gene and also known as integrin alpha E. CD103 belongs to the integrin alpha-chain family and associates with integrin beta 7 to form the alpha E beta 7 heterodimer. This adhesion receptor is expressed by prominent subsets of tissue-resident lymphocytes and participates in interactions between immune cells and epithelial tissues. Its best-characterized ligand is E-cadherin, an epithelial adhesion molecule that contributes to the localization and retention of CD103-expressing lymphocytes within epithelial environments.

CD103 expression is particularly associated with intraepithelial lymphocytes and subsets of tissue-resident memory T cells. Through alpha E beta 7 interactions with E-cadherin, these cells can maintain close contact with epithelial compartments and participate in local immune surveillance. Expression can be influenced by the tissue microenvironment, including signaling through transforming growth factor beta. CD103 is consequently studied in mucosal immunology, lymphocyte trafficking, tissue residency and mechanisms regulating immune cell interactions with epithelial

barriers.

Beyond normal immune biology, CD103 is an important marker for characterizing selected lymphoid malignancies. Expression is strongly associated with hairy cell leukemia and can contribute to immunophenotypic studies of this disease together with other hematopoietic markers. CD103 expression can also occur in subsets of T-cell neoplasms. In solid tumor research, CD103-positive tumor-infiltrating lymphocytes are studied in relation to local antitumor immune responses and the establishment of tissue-resident lymphocyte populations within the tumor microenvironment.

Clone ITGAE/2063 is a mouse monoclonal antibody generated against a recombinant region of human integrin alpha E. The Integrin Alpha E Monoclonal Antibody provides a defined reagent for investigating ITGAE expression in studies of lymphocyte differentiation, tissue residency and hematologic disease. NSJ Bioreagents offers clone ITGAE/2063 for research examining CD103 biology and alpha E beta 7-associated cellular interactions. A CD103 Antibody can provide a useful tool for investigating integrin alpha E expression, mucosal lymphocyte populations and CD103-associated immune cell biology.

Explore our CD Antibodies page for additional antibodies targeting CD-designated cell-surface proteins used in immune cell identification and research.

Application Notes

Titering of the CD103 Antibody ITGAE/2063 / Integrin Alpha E Monoclonal Antibody may be required for optimal performance.

Immunogen

A portion of amino acids 775-855 from the human protein was used as the immunogen for the CD103 Antibody ITGAE/2063.

Storage

Store the CD103 Antibody ITGAE/2063 at 2-8oC (with azide) or aliquot and store at -20oC or colder (without azide).

Alternate Names

Integrin alpha E antibody; ITGAE antibody; Integrin alpha E beta 7 antibody; alpha E integrin antibody; CD103 antigen antibody; HML-1 antigen antibody

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