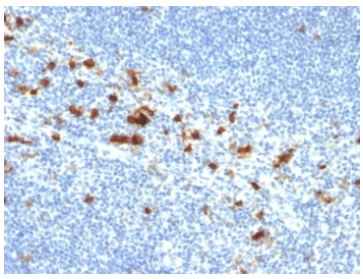
HML-1 Antibody ITGAE/2474 / Mucosal Lymphocyte 1 Antigen Antibody [clone ITGAE/2474] (V3837)

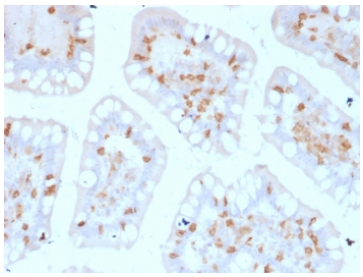
Catalog No.	Formulation	Size
V3837-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	100 ug
V3837-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	20 ug
V3837SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

Bulk quote request

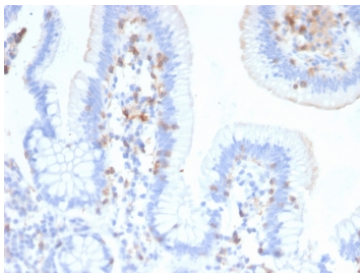
Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG2b, kappa
Clone Name	ITGAE/2474
Purity	Protein G affinity chromatography
UniProt	P38570
Localization	Cell membrane, cytoplasm
Applications	Immunohistochemistry (FFPE): 1-2ug/ml for 30 min at RT
Limitations	This HML-1 Antibody ITGAE/2474 / Mucosal Lymphocyte 1 Antigen Antibody is available for research use only.



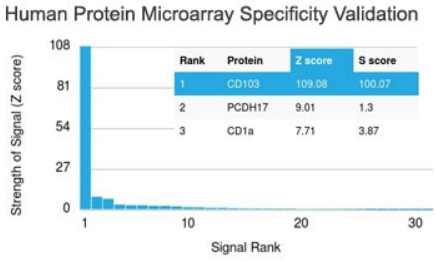
HML-1 Antibody ITGAE/2474 Staining in Human Tonsil by IHC. Immunohistochemistry of FFPE human tonsil tissue using HML-1 Antibody (clone ITGAE/2474) shows strong brown staining in a distinct population of scattered lymphoid cells against a densely hematoxylin-counterstained background. Positive cells vary in size and are distributed in clusters and individually throughout the field. Heat-induced epitope retrieval was performed by boiling tissue sections in pH 9, 1 mM EDTA buffer for 10-20 min followed by cooling at RT for 20 min. The selective cellular pattern demonstrates detection of CD103-positive lymphocytes using this Mucosal Lymphocyte 1 Antigen Antibody.



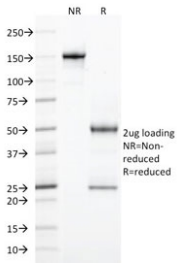
HML-1 Antibody ITGAE/2474 Staining in Human Colon by IHC. Immunohistochemistry of FFPE human colon tissue using HML-1 Antibody (clone ITGAE/2474) shows distinct brown staining in numerous cells associated with the colonic mucosa. Positive cells are concentrated within and around the glandular structures, while the surrounding nuclei are counterstained blue with hematoxylin. Heat-induced epitope retrieval was performed by boiling tissue sections in pH 9, 1 mM EDTA buffer for 10-20 min followed by cooling at RT for 20 min. This mucosal staining demonstrates detection of CD103-expressing cells using this Mucosal Lymphocyte 1 Antigen Antibody.



HML-1 Antibody ITGAE/2474 Staining in Human Small Intestine by IHC. Immunohistochemistry of FFPE human small intestine tissue using HML-1 Antibody (clone ITGAE/2474) shows localized brown staining in cells distributed within the intestinal mucosa and villous structures. Positive cells are interspersed among predominantly hematoxylin-counterstained epithelial and stromal cells, producing a heterogeneous cellular pattern. Heat-induced epitope retrieval was performed by boiling tissue sections in pH 9, 1 mM EDTA buffer for 10-20 min followed by cooling at RT for 20 min. The observed pattern supports detection of mucosal CD103-positive cells using this Mucosal Lymphocyte 1 Antigen Antibody.



HML-1 Antibody ITGAE/2474 Protein Microarray Validated. HuProt protein microarray analysis containing more than 19,000 full-length human proteins demonstrates highly selective recognition of CD103 by HML-1 Antibody (clone ITGAE/2474). CD103 ranks first with a Z-score of 108.07, compared with 8.3 for the next-ranked protein, PCDH17, producing an S-score of 99.77. 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 supports high target specificity for this Mucosal Lymphocyte 1 Antigen Antibody.



HML-1 Antibody ITGAE/2474 Purity and Integrity by SDS-PAGE. SDS-PAGE analysis of purified, BSA-free HML-1 Antibody (clone ITGAE/2474) with 2 ug loaded per lane shows the expected antibody migration profiles under non-reducing (NR) and reducing (R) conditions. The non-reduced antibody migrates predominantly near 150 kDa, while reduction produces the characteristic immunoglobulin heavy and light chain bands at approximately 50 kDa and 25 kDa. Limited additional staining is visible, supporting the integrity and purity of this Mucosal Lymphocyte 1 Antigen Antibody preparation.

Description

HML-1 Antibody ITGAE/2474 recognizes HML-1 antigen, a cell-surface glycoprotein now designated CD103 and encoded by the ITGAE gene. Also known as integrin alpha E, the protein associates with integrin beta 7 to form the alpha E beta 7 heterodimer. HML-1 was originally identified in association with human mucosal lymphocytes, reflecting the prominent expression of CD103 on lymphocyte populations residing within epithelial and mucosal tissues. The alpha E beta 7 receptor contributes to immune cell interactions with epithelial compartments through binding to E-cadherin.

CD103 expression is characteristic of many intraepithelial lymphocytes and subsets of tissue-resident memory T cells. Interaction between alpha E beta 7 and epithelial E-cadherin can contribute to the localization and retention of these lymphocytes within tissues, supporting local immune surveillance and responses at barrier surfaces. Expression of HML-1 antigen can be influenced by signals within the tissue microenvironment, including transforming growth factor beta, and is studied in relation to lymphocyte differentiation, tissue residency and mucosal immunity.

HML-1 antigen is also useful in research involving hematologic malignancies. CD103 expression is strongly associated with hairy cell leukemia and is commonly studied as part of the immunophenotypic profile of this disease. Expression can additionally occur in selected T-cell and other lymphoid neoplasms. In solid tumor research, CD103-positive tumor-

infiltrating lymphocytes are investigated for their relationship to tissue-resident immune populations and local antitumor responses. These roles make a Mucosal Lymphocyte 1 Antigen Antibody relevant to both normal immune biology and disease-focused research.

Clone ITGAE/2474 is a mouse monoclonal antibody directed against human integrin alpha E. The historical HML-1 designation provides a useful connection between early mucosal lymphocyte research and the modern CD103/ITGAE nomenclature. NSJ Bioreagents offers clone ITGAE/2474 for research examining CD103 expression, mucosal lymphocytes and alpha E beta 7-associated immune biology. An HML-1 Antibody can provide a useful tool for investigating mucosal lymphocyte 1 antigen expression, tissue-resident immune populations and CD103-associated lymphocyte biology.

For broader CD103 validation including protein microarray analysis, see our CD103 Antibody ITGAE/2063 / Integrin Alpha E Monoclonal Antibody page.

Application Notes

Titering of the HML-1 Antibody ITGAE/2474 / Mucosal Lymphocyte 1 Antigen 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 HML-1 Antibody ITGAE/2474.

Storage

Store the HML-1 Antibody ITGAE/2474 at 2-8oC (with azide) or aliquot and store at -20oC or colder (without azide).

Alternate Names

Mucosal lymphocyte 1 antigen antibody; Human mucosal lymphocyte antigen 1 antibody; HML1 antigen antibody; CD103 antibody; ITGAE antibody; Integrin alpha E antibody

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