abcam

ab227697

Anti-CD103 antibody [SP301]

Recombinant | RabMAb | 20ul selling size

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.6 Preservative: 0.1% Sodium azide Constituents: PBS, 1% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	SP301
Purification technique	Affinity purification Protein A/G
Concentration	0.4 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →
Purification notes	Purified from TCS by protein A/G.

Reactivity data

Flow Cyt

Tested

Species	Human
Dilution info	1/100
Notes	Incubate with primary antibody for 30 minutes at 4 °C.

IHC-P

Tested

Species	Human
Dilution info	1/100
Notes	Boil tissue section in EDTA buffer, pH 8.0 for 10 minutes followed by cooling at room temperature for 20 minutes. Incubate for 10 minutes at room temperature.

IHC-Fr

Tested

Species	Human
Dilution info	10 µg/mL
Notes	-

Target data

See full target information ITGAE

Function	Integrin ITGAE/ITGB7 (alpha-E/beta-7) is a receptor for E-cadherin. It mediates adhesion of intra-epithelial T-lymphocytes to epithelial cell monolayers.

Storage

Shipped at conditions	Conditional Ambient
Appropriate short-term storage duration	1-2 weeks
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	CD103 also known as ITGAE or integrin alpha E is a protein subunit that pairs with integrin beta 7 (ItgB7) to form a complete heterodimer known as the αEβ7 integrin complex. This protein typically weighs around 150 kDa. CD103 is mainly expressed on the surface of certain T lymphocytes such as CD8+ T cells in mucosal tissues and also in a subset of dendritic cells. Through its mechanical function CD103 mediates cell adhesion by specifically binding to E-cadherin on epithelial cells. This interaction facilitates the retention and positioning of lymphocytes in epithelial tissues.
Biological function summary	CD103 is essential for establishing and maintaining interactions between immune cells and epithelial cells. By incorporating into the αEβ7 integrin complex it plays an important role in the localization of intraepithelial lymphocytes and dendritic cells in the gut mucosa and skin contributing to immune surveillance and protection of these barriers. CD103 helps to control lymphocyte activation and the migration process offering a critical surface marker for identifying tissue-resident memory T cells (Trm cells) and discerning their functional potential.
Pathways	CD103 functions prominently in the immunological environment by participating in pathways that regulate lymphocyte adherence and migration. Two significant pathways it fits into include the T-cell homing and retention pathways and the antigen presentation pathway. Through these pathways CD103 interacts with molecules such as E-cadherin and impacts the movement of T cells to epithelial sites influencing tissue-specific immune responses alongside related proteins like integrin beta 7 which forms a part of the same integrin complex.
Associated diseases and disorders	CD103 has a significant connection with inflammatory and autoimmune conditions particularly in the context of inflammatory bowel disease and certain types of cancer such as colorectal cancer. Its association with E-cadherin through the integrin complex affects cellular behavior in these diseases contributing to either barrier integrity or breakdown and abnormal immune cell infiltration. Additionally in the disease context CD103 can influence interactions with proteins that regulate immune responses and tumor surveillance highlighting its role in disease progression and therapeutic potential.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

We do not recommend this combination. It is not covered by our product promise.

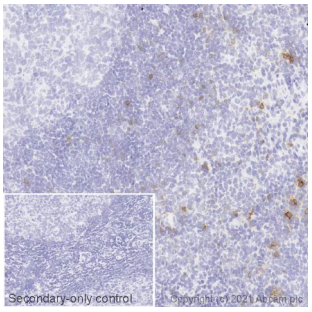
We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
Terms & Conditions.

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17 product images



Immunohistochemistry (Frozen sections) - Anti-CD103 antibody [SP301] (ab227697)

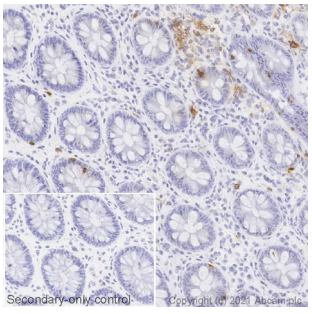
CD103 Immunohistochemistry (Frozen sections) staining using rabbit Anti-CD103 antibody

IHC image of CD103 staining in a section of frozen normal human tonsil* performed on a Leica BOND™ system using the standard protocol. The section was fixed in 10% paraformaldehyde (10 min) prior to staining. The section was incubated with ab227697, 10ugml, for 15 mins at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX. The inset secondary-only control image is taken from an identical assay without primary antibody.

For other IHC staining systems (automated and non-automated) customers should optimize variable parameters such as antigen retrieval conditions, primary antibody concentration and antibody incubation times.

*Tissue obtained from the Human Research Tissue Bank, supported by the NIHR Cambridge Biomedical Research Centre

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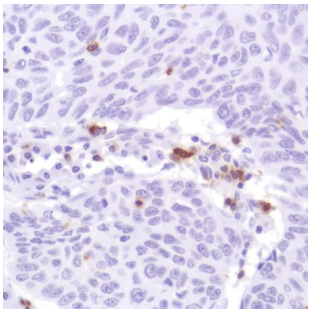
Immunohistochemistry (Frozen sections) - Anti-CD103 antibody [SP301] (ab227697)

CD103 Immunohistochemistry (Frozen sections) staining using rabbit Anti-CD103 antibody

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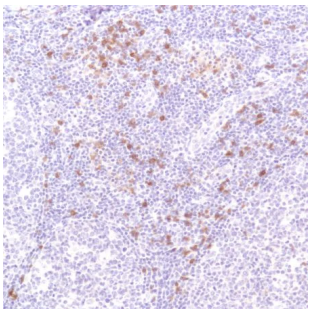
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Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CD103 antibody [SP301] (ab227697)

CD103 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-CD103 antibody

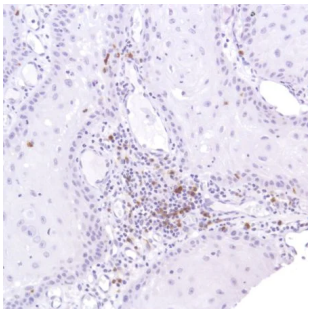
Formalin-fixed paraffin-embedded human lung squamous cell carcinoma tissue stained for CD103 with ab227697 at 1/100 dilution in immunohistochemical analysis.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CD103 antibody [SP301] (ab227697)

CD103 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-CD103 antibody

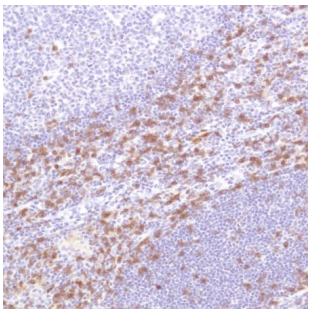
Formalin-fixed, paraffin-embedded human tonsil tissue stained for CD103 with ab227697 at 1/100 dilution in immunohistochemical analysis.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CD103 antibody [SP301] (ab227697)

CD103 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-CD103 antibody

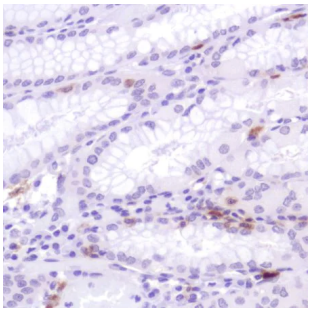
Formalin-fixed paraffin-embedded human skin squamous cell carcinoma tissue stained for CD103 with ab227697 at 1/100 dilution in immunohistochemical analysis.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CD103 antibody [SP301] (ab227697)

CD103 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-CD103 antibody

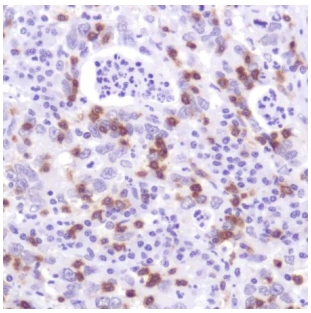
Formalin-fixed, paraffin-embedded human tonsil tissue stained for CD103 with ab227697 at 1/100 dilution in immunohistochemical analysis.



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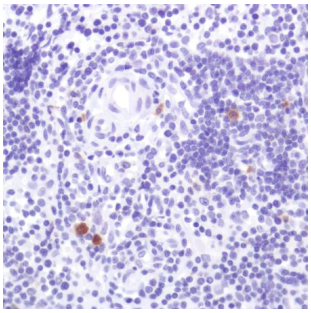
Formalin-fixed paraffin-embedded human stomach tissue stained for CD103 with ab227697 at 1/100 dilution in immunohistochemical analysis.



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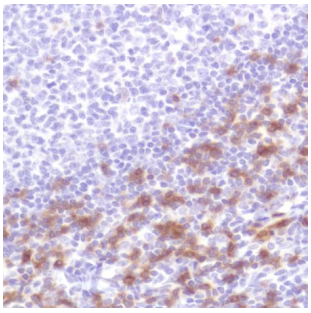
Formalin-fixed paraffin-embedded human stomach adenocarcinoma carcinoma tissue stained for CD103 with ab227697 at 1/100 dilution in immunohistochemical analysis.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CD103 antibody [SP301] (ab227697)

CD103 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-CD103 antibody

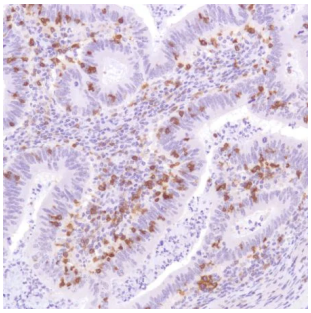
Formalin-fixed paraffin-embedded human thymus tissue stained for CD103 with ab227697 at 1/100 dilution in immunohistochemical analysis.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CD103 antibody [SP301] (ab227697)

CD103 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-CD103 antibody

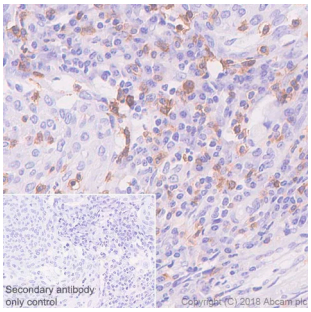
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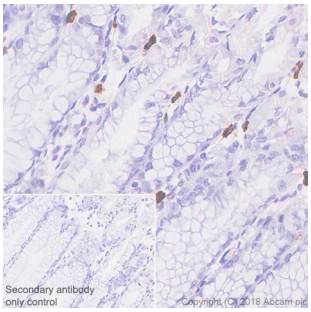
Formalin-fixed paraffin-embedded human colon adenocarcinoma tissue stained for CD103 with ab227697 at 1/100 dilution in immunohistochemical analysis.



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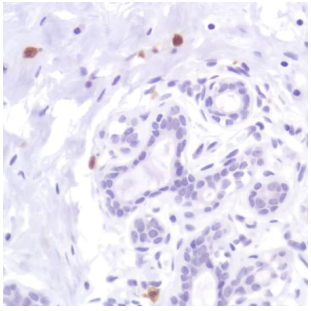
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of Human cervical carcinoma tissue sections labeling CD103 with ab227697 at 1/100 dilution (3.99 µg/ml). Heat mediated antigen retrieval was performed Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution 2) for 10 mins. Rabbit specific IHC polymer detection kit HRP/DAB (ab209101) was used as the secondary antibody. Negative control: PBS instead of the primary antibody. Hematoxylin was used as a counterstain.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CD103 antibody [SP301] (ab227697)

CD103 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-CD103 antibody

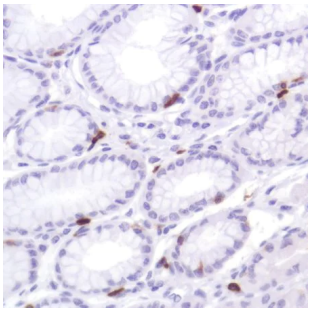
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Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CD103 antibody [SP301] (ab227697)

CD103 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-CD103 antibody

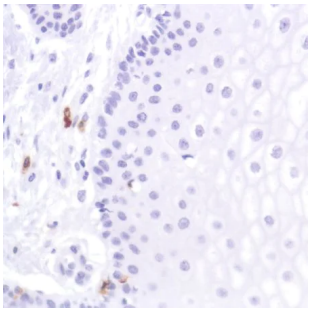
Formalin-fixed paraffin-embedded human breast tissue stained for CD103 with ab227697 at 1/100 dilution in immunohistochemical analysis.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CD103 antibody [SP301] (ab227697)

CD103 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-CD103 antibody

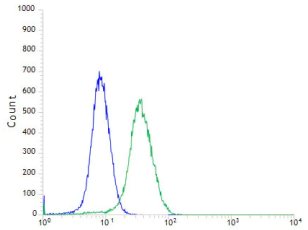
Formalin-fixed paraffin-embedded human colon tissue stained for CD103 with ab227697 at 1/100 dilution in immunohistochemical analysis.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CD103 antibody [SP301] (ab227697)

CD103 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-CD103 antibody

Formalin-fixed paraffin-embedded human cervix tissue stained for CD103 with ab227697 at 1/100 dilution in immunohistochemical analysis.



Flow Cytometry - Anti-CD103 antibody [SP301] (ab227697)

Flow cytometric analysis of Jurkat (human T cell leukemia T lymphocyte) cells labeling CD103 with ab227697 at 1/100 dilution (green) compared with a negative control rabbit IgG (blue).

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