abcam

ab310294

Alexa Fluor® 647 Anti-CD103 antibody [SP301]

Recombinant | RabMAb

Key facts

Isotype	IgG
Host species	Rabbit
Conjugation	Alexa Fluor® 647
Excitation/Emission	Ex: 650nm, Em: 665nm
Storage buffer	pH: 7.4 Preservative: 0.02% Sodium azide Constituents: PBS, 30% Glycerol (glycerin, glycerine), 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

Reactivity data

Target Binding Affinity

Expected

Species	Human
Dilution info	Use at an assay dependent concentration.
Notes	-

Antibody Labelling

Expected

Species	Human
Dilution info	Use at an assay dependent concentration.
Notes	-

Flow Cyt

Expected

Species	Human
Dilution info	Use at an assay dependent concentration.
Notes	-

IHC-P

Expected

Species	Human
Dilution info	Use at an assay dependent concentration.
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	Blue Ice
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, Store in the dark

Notes

How are conjugated primary antibodies validated?
This conjugated primary antibody is released using a quantitative quality control method that evaluates binding affinity post-conjugation and efficiency of antibody labeling.
For suitable applications and species reactivity, please refer to the unconjugated version of this clone.

What are the advantages of a recombinant monoclonal antibody?
This product is a recombinant monoclonal antibody, which offers several advantages including:

- High batch-to-batch consistency and reproducibility
- Improved sensitivity and specificity
- Long-term security of supply
- Animal-free batch production

For more information, read more on recombinant antibodies.

Patented technology
Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.

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.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.