abcam

ab25198

Anti-CD103 antibody [2E7]

Key facts

Isotype	IgG
Host species	Armenian hamster
Storage buffer	pH: 8.2 Constituents: 0.95% Sodium borate, 0.6% Boric Acid
Form	Liquid
Clonality	Monoclonal
Clone number	2E7
Purification technique	Affinity purification
Light chain type	kappa
Concentration	0.5 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IP

Expected

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

Flow Cyt

Expected

Species	Mouse
Dilution info	-
Notes	ab18479 - Armenian Hamster monoclonal IgG, is suitable for use as an isotype control with this antibody.

FuncS (Act)

Expected

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

IHC-Fr

Expected

Species	Mouse
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 conditions	+4°C
Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot

Storage information	Avoid freeze / thaw cycle

Notes

This antibody is reported to have signal inducing activity in a redirected lysis assay and to co stimulate IEL and CD8+ lymph node cells in conjunction with anti TCR in vitro, which runs counter to the usual inhibition of CTL by anti integrins. The property of costimulation is not unique to the mouse since the combination of anti human alpha IEL (intraepithelial lymphocytes) plus anti TCR will produce similar proliferation in human cells, with the exception that CD8+ cells are not stimulated.

REACH authorisation
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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.

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