abcam

ab95527

FITC Anti-CD8 beta antibody [341]

Anti-CD8 beta antibody [341] conjugated to FITC - suitable for flow cytometry, and reacts with rat samples. Clone [341] is a mouse monoclonal antibody cited in 5 publications.

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Key facts

Isotype	IgG1
Host species	Mouse
Conjugation	FITC
Excitation/Emission	Ex: 495nm, Em: 519nm
Storage buffer	pH: 7.2 Preservative: 0.09% Sodium azide Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	Cell preparation containing Cd8b protein. The exact immunogen used to generate this antibody is proprietary information. Database link P05541
Clone number	341
Purification technique	Affinity purification Protein G
Light chain type	kappa

Reactivity data

Flow Cyt

Tested

Species	Rat

Dilution info	0.5 µg for 10^5-10^8 Cells
Notes	ab106163 - Mouse monoclonal IgG1, is suitable for use as an isotype control with this antibody.

Target data

See full target information Cd8b

Function	Integral membrane glycoprotein that plays an essential role in the immune response and serves multiple functions in responses against both external and internal offenses. In T-cells, functions primarily as a coreceptor for MHC class I molecule:peptide complex. The antigens presented by class I peptides are derived from cytosolic proteins while class II derived from extracellular proteins. Interacts simultaneously with the T-cell receptor (TCR) and the MHC class I proteins presented by antigen presenting cells (APCs). In turn, recruits the Src kinase LCK to the vicinity of the TCR-CD3 complex. A palmitoylation site in the cytoplasmic tail of CD8B chain contributes to partitioning of CD8 into the plasma membrane lipid rafts where signaling proteins are enriched. Once LCK recruited, it initiates different intracellular signaling pathways by phosphorylating various substrates ultimately leading to lymphokine production, motility, adhesion and activation of cytotoxic T-lymphocytes (CTLs). Additionally, plays a critical role in thymic selection of CD8+ T-cells.

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	+4°C

Notes

Excitation: 488 nm Emission: 518 nm.

Supplementary info

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

Activity summary	The target CD8 beta also known as CD8b or CD8B is a protein component of the CD8 coreceptor that is primarily expressed on the surface of cytotoxic T lymphocytes and a subset of natural killer cells. The CD8 beta molecule pairs with CD8 alpha to form a heterodimer that plays an essential role in the immune

	response. The molecular weight of CD8 beta is approximately 34 kDa. It is located primarily in the plasma membrane where it interacts with major histocompatibility complex (MHC) class I molecules.
Biological function summary	The CD8 beta protein works as part of the CD8 coreceptor complex which enhances the interaction between T cell receptors (TCRs) and antigens presented by MHC class I on infected or malignant cells. This interaction strengthens the activation signal received by T cells. The CD8 complex including CD8 beta contributes to the recognition and elimination of cells presenting foreign antigens which is essential for the adaptive immune response.
Pathways	The CD8 beta protein participates in pathways related to antigen recognition and T cell receptor signaling. The protein together with CD8 alpha facilitates signal transduction following TCR engagement. This action is vital for the activation of cytotoxic T cells enabling immune responses. CD8 beta associates with the Lck kinase another vital player in the TCR signaling pathway through its cytoplasmic tail. In this pathway the presence of CD8 beta helps maintain and modulate effective immune responses.
Associated diseases and disorders	CD8 beta plays a significant role in conditions like viral infections and autoimmune diseases. In viral infections the presence of the CD8 complex containing CD8 beta aids in the destruction of virus-infected cells. In autoimmune diseases abnormal CD8 T cell responses can result in self-tissue damage reflecting dysregulation in its normal function. CD8 beta therefore proves critical in these contexts contributing to disease dynamics by interacting with proteins like MHC class I and Lck kinase during improper immune responses.

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

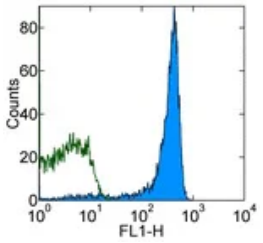
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1 product image



Flow Cytometry - FITC Anti-CD8 beta antibody [341] (ab95527)

CD8 beta Flow Cytometry staining using mouse Anti-CD8 beta antibody

Staining of rat thymocytes with 0.25 µg of Mouse IgG1 kappa Isotype Control FITC (open histogram) or 0.25 µg of ab95527 FITC (filled histogram). Cells in the lymphocyte gate were used for analysis.

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