abcam

ab313760

PE Anti-CD8 antibody [EPR22331-81]

Recombinant | RabMAb

Key facts

Isotype	IgG
Host species	Rabbit
Conjugation	PE
Excitation/Emission	Ex: 480;565nm, Em: 578nm
Storage buffer	pH: 7.4 Preservative: 0.02% Sodium azide Constituents: PBS, 1% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	EPR22331-81
Purification technique	Affinity purification Protein A

Reactivity data

Flow Cyt

Tested

Species	Mouse
Dilution info	1/2500
Notes	-

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 duration	1-2 weeks
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	+4°C
Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle, Store in the dark

Notes

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.

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.

Supplementary info

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

Activity summary	CD8 also known as CD8a or Leu-2 is a glycoprotein with a molecular weight of approximately 32 kDa. It is prominently expressed on the surface of cytotoxic T lymphocytes. These CD8 molecules facilitate the interaction between T cells and antigen-presenting cells by binding to major histocompatibility complex (MHC) class I molecules. This interaction is essential for the immune system to recognize and destroy infected or cancerous cells. CD8 is often identified using various markers like CD8 FITC CD8 APC and CD8 PerCP which are used in flow cytometry for cell sorting and analysis.
Biological function summary	CD8 plays a significant role in the adaptive immune response. It is not part of a multimeric complex but functions as a co-receptor that enhances the recognition of antigens by the T cell receptor (TCR). The presence of CD8 molecules aids the activation of T cells leading to their proliferation and the effective targeting and elimination of pathogens or abnormal cells. The ability of CD8 to bind to MHC class I molecules allows cytotoxic T cells to detect and respond to nearly all nucleated cells in the body.
Pathways	CD8 is integral in both the T cell receptor signaling pathway and the induction of apoptosis. In the T cell receptor signaling pathway CD8 works closely with other proteins like Lck and ZAP-70 to transmit signals upon TCR-MHC class I engagement. This promotes T cell activation cytokine production and cell division. Furthermore CD8's interaction with Fas ligand pathways contributes to the initiation of programmed cell death which is important for maintaining immune homeostasis and preventing overreaction of the immune system.
Associated diseases and disorders	CD8 T cells are significant in the context of viral infections and autoimmune diseases. For example during HIV infection the depletion of CD8 T cells impairs the immune response allowing the virus to evade the immune system. Additionally in autoimmune disorders like Type 1 diabetes CD8 T cells mistakenly target and destroy insulin-producing beta cells in the pancreas. These pathological processes also involve proteins such as MHC class I and other immune modulators like interleukins that modulate CD8 T cell activity and differentiation.

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.

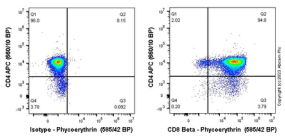
We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

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

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1 product image



Flow Cytometry - PE Anti-CD8 antibody [EPR22331-81] (ab313760)

CD8 Flow Cytometry staining of C57 BL/6 mouse thymocytes using rabbit Anti-CD8 antibody

Flow cytometry staining of C57 BL/6 mouse thymocytes with ab313760 (right) or Rabbit IgG (monoclonal) Phycoerythrin (ab209478) (left). C57 BL/6 mouse thymocytes were incubated for 30 min on ice in 1x PBS containing 10 µg/ml anti CD16/CD32 and 10% normal goat serum to block FC receptors and non-specific protein-protein interaction followed by the antibody ab313760 or Rabbit IgG (monoclonal) Phycoerythrin (ab209478) (1x 10^6 in 100 µl at 0.2 µg/ml (1/2500)) for 30 min on ice. The cells were simultaneously stained with CD4.

Acquisition of >30000 events were collected using a 50 mW Yellow/Green laser (561nm) and 585/42 bandpass filter.

Events were gated on viable cells.

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