abcam

ab22504

FITC Anti-CD8 alpha antibody [KT15]

Anti-CD8 alpha antibody [KT15] conjugated to FITC - suitable for flow cytometry, and reacts with mouse samples. Clone [KT15] is a rat monoclonal antibody cited in 21 publications.

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Key facts

Isotype	IgG2a
Host species	Rat
Conjugation	FITC
Excitation/Emission	Ex: 495nm, Em: 519nm
Storage buffer	pH: 7.4 Preservative: 0.1% Sodium azide Constituents: PBS, 1% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	Cell preparation containing Cd8a protein. The exact immunogen used to generate this antibody is proprietary information. Database link P01731
Clone number	KT15
Purification technique	Affinity purification Protein A
Specificity	ab22504 recognises a non-polymorphic epitope on the mouse CD8 alpha chain. Stains mouse Ly2.1 and Ly2.2 cells.
Concentration	0.1 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

Flow Cyt

Tested

Species	Mouse
Dilution info	-
Notes	ab18446 - Rat monoclonal IgG2a, is suitable for use as an isotype control with this antibody.

Target data

See full target information Cd8a

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. LCK then initiates different intracellular signaling pathways by phosphorylating various substrates ultimately leading to lymphokine production, motility, adhesion and activation of cytotoxic T-lymphocytes (CTLs). This mechanism enables CTLs to recognize and eliminate infected cells and tumor cells. In NK-cells, the presence of CD8A homodimers at the cell surface provides a survival mechanism allowing conjugation and lysis of multiple target cells. CD8A homodimer molecules also promote the survival and differentiation of activated lymphocytes into memory CD8 T-cells.

Storage

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

Notes

Purified IgG conjugated to Fluorescein Isothiocyanate Isomer 1 (FITC) FITC : Protein (molar ratio) = 5.3 : 1.0

Supplementary info

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

Activity summary	CD8 alpha also known as CD8A or CD8 protein is a glycoprotein subunit expressed on the surface of cytotoxic T lymphocytes. It has a mass of approximately 32 kDa. Found on the surface cell membrane CD8 alpha functions primarily in the immune response specifically in the recognition of antigens bound to major histocompatibility complex (MHC) class I molecules. Often scientists use CD8 antibodies for detection and CD8 IHC or immunohistochemistry for localization studies.
Biological function summary	The CD8 alpha protein plays a critical role in T-cell mediated immune responses. It forms a heterodimer with the CD8 beta chain creating the CD8 alpha-beta complex that strengthens T-cell interaction with antigen-presenting cells. CD8 alpha also helps in signaling processes that activate T cells equipping them to destroy infected or malignant cells. Researchers often study CD8 alpha peptides to understand its interactions better.
Pathways	CD8 alpha is integral to the T-cell receptor signaling pathway and the cytotoxic T lymphocyte (CTL) pathway. The T-cell receptor complex which includes the CD8 molecule transmits signals that are important for T-cell activation and function. CD8 interacts with key proteins such as the T-cell receptor (TCR) and MHC class I molecules facilitating targeted responses against pathogens. These pathways highlight CD8 alpha's role in adaptive immunity.
Associated diseases and disorders	CD8 alpha is most prominently associated with viral infections and cancer. Conditions like HIV and some forms of leukemia show altered CD8 function highlighting the protein's role in immune surveillance. In HIV infection for instance CD8 T cells reduce in number impairing the immune response. CD8 alpha's connection to the immune system places it alongside other immune proteins such as CD4 and MHC molecules in the context of immune dysfunction.

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

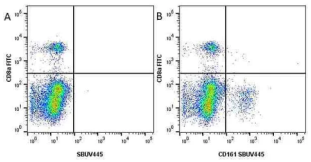
We do not recommend this combination. It is not covered by our product promise.

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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2 product images



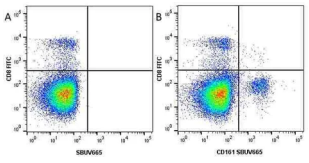
Flow Cytometry - FITC Anti-CD8 alpha antibody [KT15] (ab22504)

CD8 alpha Flow Cytometry staining of Red cell lysed mouse blood using rat Anti-CD8 alpha antibody

Flow cytometry staining of red cell lysed mouse blood with ab22504.
Figure A. FITC conjugated Rat anti Mouse CD8a antibody, clone KT15 (ab22504). Figure B. FITC conjugated Rat anti Mouse CD8a antibody, clone KT15 (ab22504) and StarBright™ UltraViolet 445 conjugated Rat anti Mouse antibody.

All experiments performed on red cell lysed mouse blood gated on live single cell lymphocytes, in the presence of 10% mouse serum. Use 10ul of the suggested working dilution to label 10^6 cells in 100ul. (Use Neat - 1/10 dilution).

Data acquired on the ZE5 Cell Analyzer.



Flow Cytometry - FITC Anti-CD8 alpha antibody [KT15] (ab22504)

CD8 alpha Flow Cytometry staining of Red cell lysed mouse blood using rat Anti-CD8 alpha antibody

Flow cytometry staining of red cell lysed mouse blood with ab22504.
Figure A. FITC conjugated Rat anti Mouse CD8a antibody, clone KT15 (ab22504). Figure B. FITC conjugated Rat anti Mouse CD8a antibody, clone KT15 (ab22504) and StarBright™ UltraViolet 665 conjugated Mouse anti Mouse CD161 antibody.

All experiments performed on red cell lysed mouse blood gated on live single cell lymphocytes, in the presence of 10% mouse serum. Use 10ul of the suggested working dilution to label 10^6 cells in 100ul. (Use Neat - 1/10 dilution).

Data acquired on the ZE5 Cell Analyzer.

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