abcam

ab316355

Anti-CD8 alpha antibody [Bu88]

Key facts

Isotype	IgG1
Host species	Mouse
Storage buffer	Preservative: 0.1% Sodium azide Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	Native Full Length Protein corresponding to Human CD8A. Database link P01732
Clone number	Bu88
Light chain type	kappa
Concentration	1 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

ICC/IF

Tested

Species	Human
Dilution info	1/50 - 1/100
Notes	-

Flow Cyt

Tested

Species	Human
Dilution info	1/50 - 1/100
Notes	(Unfixed cells)

WB

Tested

Species	Human
Dilution info	1 µg/mL
Notes	-

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 duration	1 month
Appropriate short-term storage conditions	+4°C

Appropriate long-term storage conditions	-20°C
Storage information	Avoid freeze / thaw cycle

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

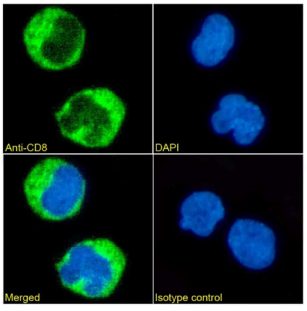
We do not recommend this combination. It is not covered by our product promise.

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.

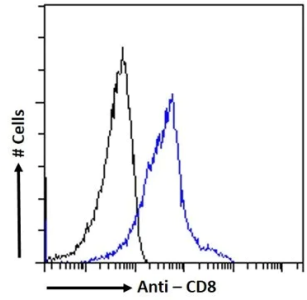
Full details and terms and conditions can be found here:
Terms & Conditions.

3 product images



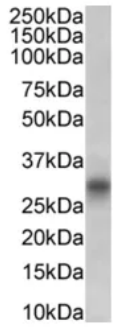
Immunocytochemistry/ Immunofluorescence - Anti-CD8 alpha Antibody [Bu88] (ab316355)

Immunofluorescence analysis of paraformaldehyde fixed Jurkat (Human T cell leukemia cell line from peripheral blood) cells. Primary incubation 1hr (1:50-1:100 dilution) followed by Alexa Fluor® 488 secondary antibody (1:1000 dilution), showing membrane and cytoplasmic staining. The nuclear stain is DAPI (blue). Isotype control: Anti-Fluorescein followed by Alexa Fluor® 488 secondary antibody.



Flow Cytometry - Anti-CD8 alpha Antibody [Bu88] (ab316355)

Blue line: Flow cytometric analysis of Jurkat (Human T cell leukemia cell line from peripheral blood) cells. Primary incubation 1hr (1:50-1:100 dilution) followed by Alexa Fluor 488 ® conjugated goat Anti-mouse IgG (1:1000 dilution). Black line: Anti-Unknown Specificity Isotype control.



Western blot - Anti-CD8 alpha Antibody [Bu88] (ab316355)

(1 µg/ml) staining in MOLT-4 (Human lymphoblastic leukemia cell line) lysate (35 µg protein in RIPA buffer). Primary incubation was 1 hour. Detected by chemiluminescence.
All lanes:
Western blot - Anti-CD8 alpha Antibody [Bu88] (ab316355) at 1 µg/mL

All lanes:
MOLT-4 cell lysate

Developed using the ECL technique.

Exposure time: 1hr

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