abcam

## ab242272

# violetFluor™ 450 Anti-CD8 alpha antibody [Hit8a]

Anti-CD8 alpha antibody [Hit8a] conjugated to violetFluor™ 450 - suitable for flow cytometry, and reacts with human samples. Clone [Hit8a] is a mouse monoclonal antibody.

Design your panel with our interactive flow cytometry panel builder. Click here.

## Key facts

| | |
|---|---|
| **Isotype** | IgG1 |
| **Host species** | Mouse |
| **Conjugation** | violetFluor™ 450 |
| **Excitation/Emission** | Ex: 405nm, Em: 450nm |
| **Storage buffer** | pH: 7.2 Preservative: 0.09% Sodium azide Constituents: 0.87% Sodium chloride, 0.12% Sodium dihydrogen phosphate, 0.1% Gelatin |
| **Form** | Liquid |
| **Clonality** | Monoclonal |
| **Clone number** | Hit8a |
| **Purification technique** | Affinity purification |
| **Light chain type** | kappa |
| **Purification notes** | Purified from tissue culture supernatant via affinity chromatography. The purified antibody was conjugated under optimal conditions, with unreacted dye removed from the preparation. |

## Reactivity data

## Flow Cyt

**Tested**

| | |
|---|---|
| **Species** | Human |
| **Dilution info** | 5 µL for $10^5$-$10^8$ Cells |
| **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 conditions** | +4°C |
| **Appropriate long-term storage conditions** | +4°C |
| **Storage information** | Store in the dark |

## Notes

If used together with an alternative Anti-Human CD8 alpha clone RPA-T8, the Hit8a antibody will not block binding of RPA-T8 to CD8 alpha.

## 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**

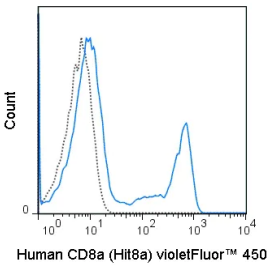
We do not recommend this combination. It is not covered by our product promise.

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.

## 1 product image




### Flow Cytometry - violetFluor™ 450 Anti-CD8 alpha antibody [Hit8a] (ab242272)

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

Flow cytometric analysis of human peripheral blood lymphocytes staining CD8 alpha using 5 µl (1 µg) ab242272 (solid line) or 1 µg violetFluor™ 450 Mouse IgG1 isotype control (dashed line).

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