Alexa Fluor™ 488-Labeled Human CD8 alpha Protein, His Tag

Catalog # CDA-HA2H6

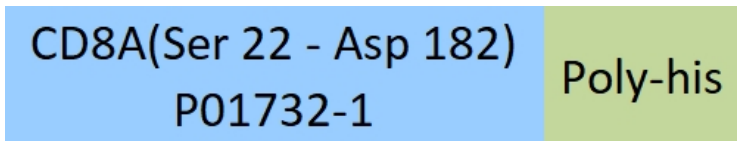
Synonym

CD8A,CD8,Leu2,MAL,p32

Source

Alexa Fluor 488-Labeled Human CD8 alpha Protein, His Tag (CDA-HA2H6) is expressed from human 293 cells (HEK293). It contains AA Ser 22 - Asp 182 (Accession # P01732-1). It is the Alexa Fluor 488 labeled form of Human CD8 alpha Protein, His Tag.
Predicted N-terminus: Ser 22

Molecular Characterization



This protein carries a polyhistidine tag at the C-terminus.

The protein has a calculated MW of 19.5 kDa. The protein migrates as 23-30 kDa when calibrated against Star Ribbon Pre-stained Protein Marker under reducing (R) condition (SDS-PAGE) due to glycosylation.

Conjugate

AF488

Excitation Wavelength: 488 nm

Emission Wavelength: 517 nm

Labeling

The primary amines in the side chains of lysine residues and the N-terminus of the protein are conjugated with AF488 using standard chemical labeling method. The residual AF488 is removed by molecular sieve treatment during purification process.

Protein Ratio

The AF488 to protein molar ratio is *1-3*.

Purity

>90% as determined by SDS-PAGE.

Formulation

Lyophilized from 0.22 μm filtered solution in PBS, pH7.4 with trehalose as protectant.

Contact us for customized product form or formulation.

Reconstitution

Please see Certificate of Analysis for specific instructions.

For best performance, we strongly recommend you to follow the reconstitution protocol provided in the CoA.

Storage

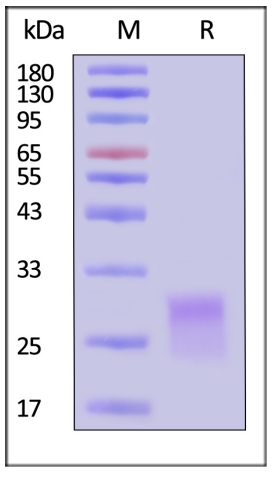
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

Please protect from light and avoid repeated freeze-thaw cycles.

This product is stable after storage at:

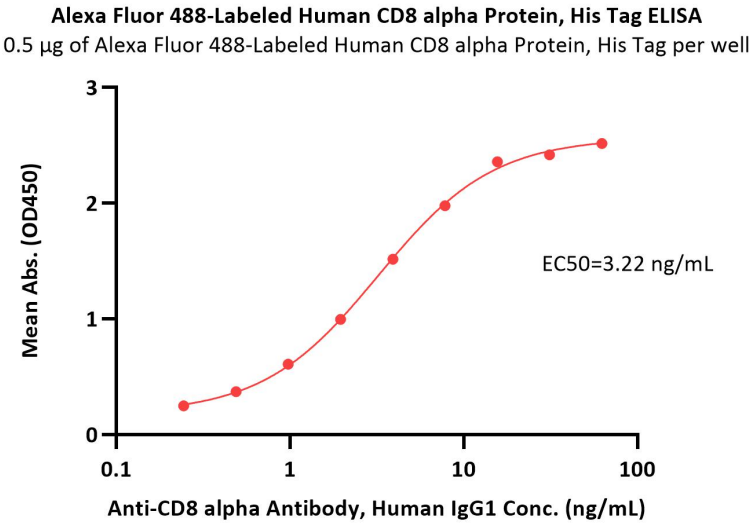
- -20°C to -70°C for 12 months in lyophilized state;
- -70°C for 3 months under sterile conditions after reconstitution.

SDS-PAGE

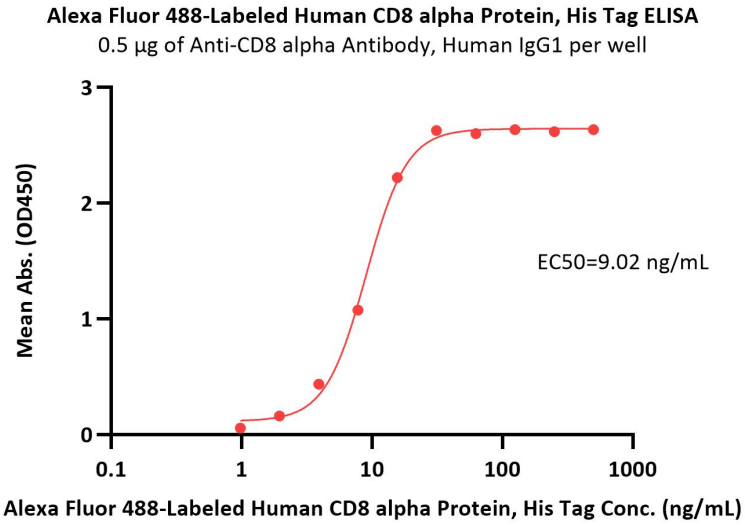


Alexa Fluor 488-Labeled Human CD8 alpha Protein, His Tag on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 90% (With Star Ribbon Pre-stained Protein Marker).

Bioactivity-ELISA

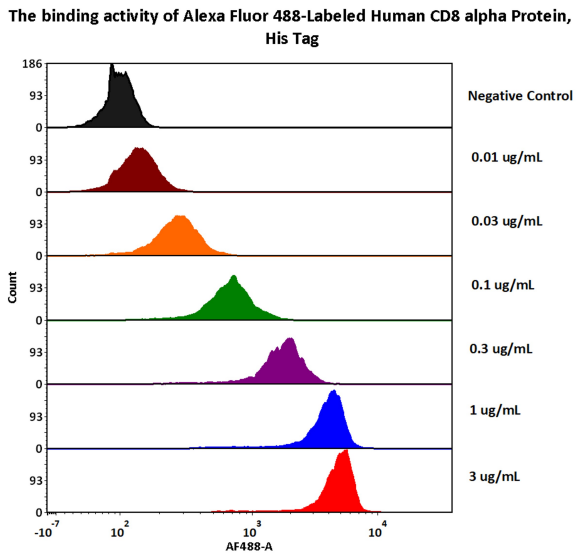


Immobilized Alexa Fluor 488-Labeled Human CD8 alpha Protein, His Tag (Cat. No. CDA-HA2H6) at 5 μg/mL (100 μL/well) can bind Anti-CD8 alpha Antibody, Human IgG1 with a linear range of 0.2-16 ng/mL (Routinely tested).

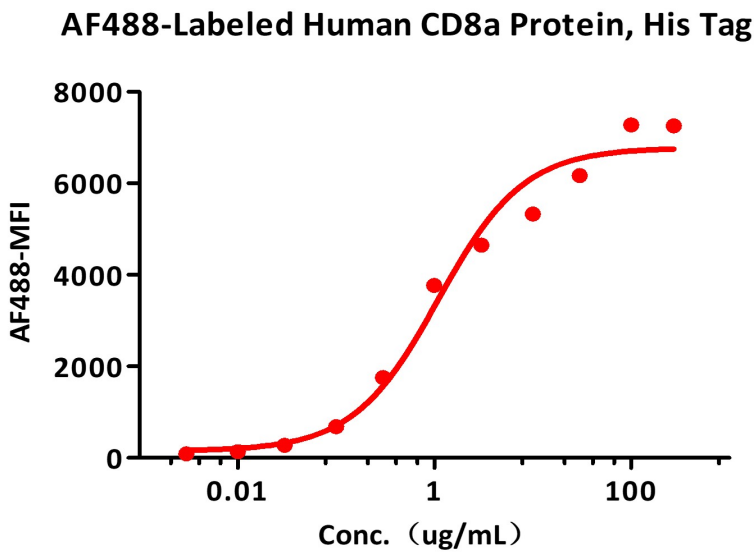


Immobilized Anti-CD8 alpha Antibody, Human IgG1 at 5 μg/mL (100 μL/well) can bind Alexa Fluor 488-Labeled Human CD8 alpha Protein, His Tag (Cat. No. CDA-HA2H6) with a linear range of 1-16 ng/mL (Routinely tested).

Bioactivity-FACS



1e5 of Mouse Anti-CD8 antibody coupled beads (5.5 μm) were stained with different concentration of Alexa Fluor 488-Labeled Human CD8 alpha Protein, His Tag (Cat. No. CDA-HA2H6) and negative control protein respectively, AF488 signal was used to evaluate the binding activity (QC tested).



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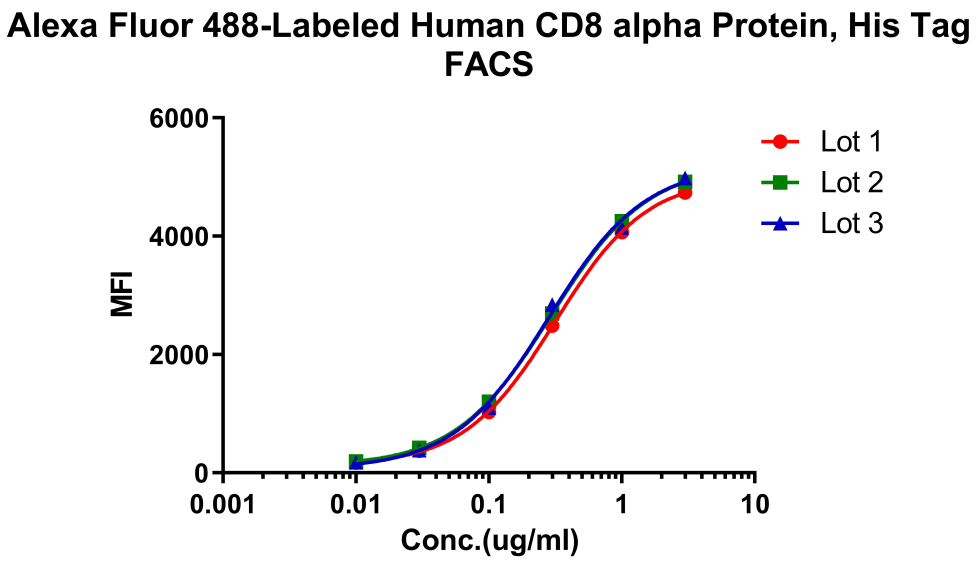
Bioactivity-Stability



Binding activity of three different lots of Alexa Fluor 488-Labeled Human CD8 alpha Protein, His Tag against Mouse Anti-CD8 antibody coupled beads (5.5 μm) was evaluated by flow cytometry. The result shows very high batch-to-batch consistency.

Background

Integral membrane glycoprotein that plays an essential role in the immune response and serves multiple functions in responses against both external and internal offenses. 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. 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.