

Biotinylated Human HLA-DRA1*01:01&HLA-DRB1*04:01&Influenza HA (PKYVKQNTLKLAT)

Complex Protein (Monomer)

Catalog # HLA-H82Eb



BIOSYSTEMS
Acro

Synonyms

HLA-DRA1*0101 & HLA-DRB1*0401 & Influenza HA (PKYVKQNTLKLAT)

Source

Biotinylated Human HLA-DRA1*01:01&HLA-DRB1*04:01&Influenza HA (PKYVKQNTLKLAT) Complex Protein (HLA-H82Eb) is expressed from human 293 cells (HEK293). It contains AA Ile 26 - Glu 216 (HLA-DRA1*01:01) & Gly 30 - Lys 227 (HLA-DRB1*04:01) & PKYVKQNTLKLAT peptide (Accession # [CAI2388006.1](#) (HLA-DRA1*01:01) & [CAI9239961.1](#) (HLA-DRB1*04:01) & PKYVKQNTLKLAT).

Molecular Characterization

Biotinylated Human HLA-DRA1*01:01&HLA-DRB1*04:01&Influenza HA (PKYVKQNTLKLAT) Complex Protein is produced by co-expression of HLA-DRA1 and HLA-DRB1 loaded with Influenza HA peptide.

This protein carries a polyhistidine tag at the C-terminus, followed by an Avi tag (Avitag™).

The protein has a calculated MW of 29.8 kDa and 29.0 kDa. The protein migrates as 33-40 kDa when calibrated against [Star Ribbon Pre-stained Protein Marker](#) under reducing (R) condition (SDS-PAGE) due to glycosylation.

Labeling

Biotinylation of this product is performed using Avitag™ technology. Briefly, the single lysine residue in the Avitag is enzymatically labeled with biotin.

Purity

>90% as determined by SDS-PAGE.

>90% as determined by SEC-MALS.

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.

Shipping and Storage

This product is shipped at ambient temperature.

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

Please avoid repeated freeze-thaw cycles.

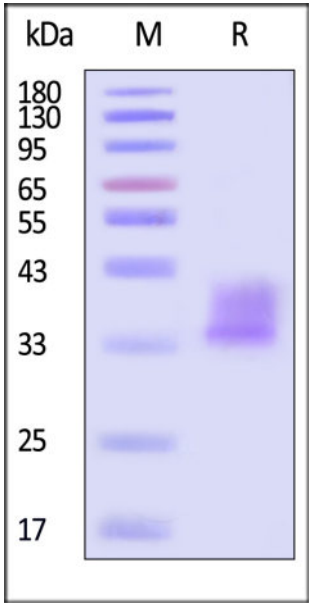
This product is stable after storage at:

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

ACRO Quality Management System

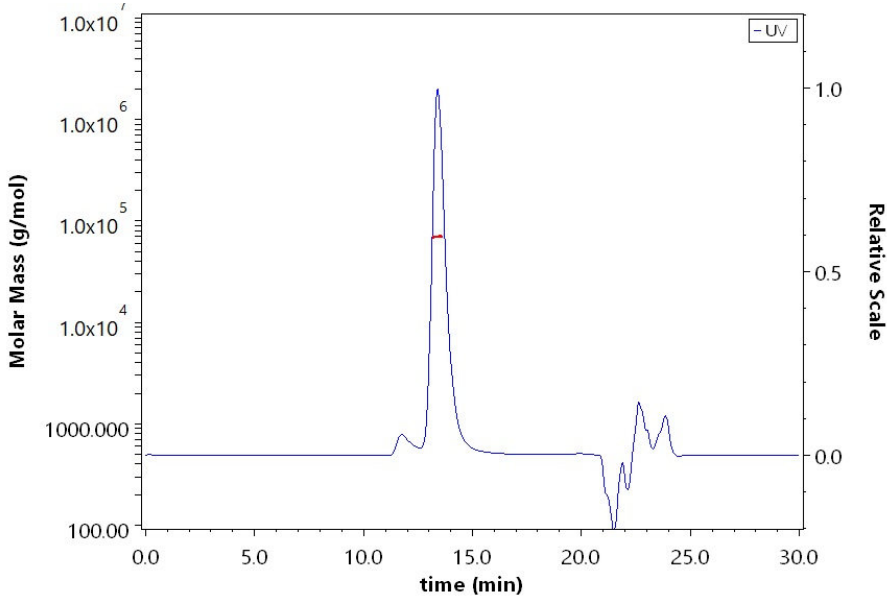
- [QMS\(ISO, GMP\)](#)
- [Quality Advantages](#)
- [Quality Control Process](#)

SDS-PAGE



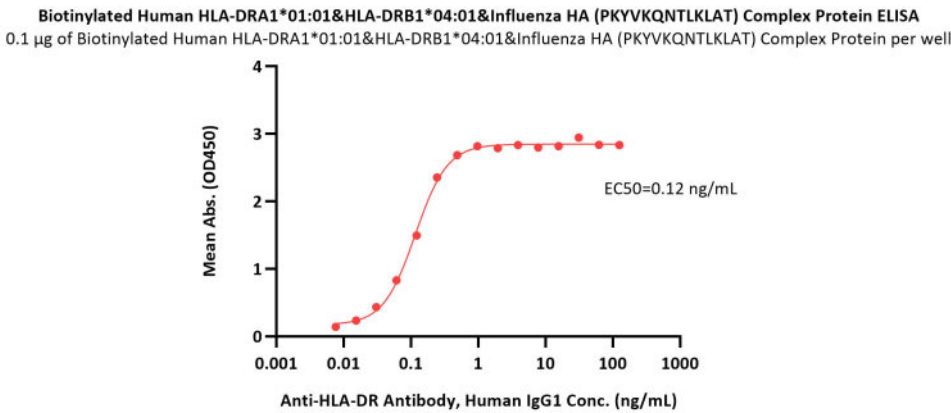
Biotinylated Human HLA-DRA1*01:01&HLA-DRB1*04:01&Influenza HA (PKYVKQNTLKLAT) Complex Protein on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 90% (With [Star Ribbon Pre-stained Protein Marker](#)).

SEC-MALS



The purity of Biotinylated Human HLA-DRA1*01:01&HLA-DRB1*04:01&Influenza HA (PKYVKQNTLKLAT) Complex Protein (Cat. No. HLA-H82Eb) is more than 90% and the molecular weight of this protein is around 55-75 kDa verified by SEC-MALS.

Bioactivity-ELISA



Immobilized Biotinylated Human HLA-DRA1*01:01&HLA-DRB1*04:01&Influenza HA (PKYVKQNTLKLAT) Complex Protein (Cat. No. HLA-H82Eb) at 1 µg/mL (100 µL/well) on streptavidin (Cat. No. STN-N5116) precoated (0.5 µg/well) plate can bind Anti-HLA-DR Antibody, Human IgG1 with a linear range of 0.008-0.2 ng/mL (QC tested).

Background

The peptide PKYVKQNTLKLAT, derived from the hemagglutinin (HA) protein of influenza virus, is presented by the MHC class II molecule HLA-DRA1*01:01/HLA-DRB1*04:01. This complex serves as a prototypical target for virus-specific CD4⁺ T helper cells, which are crucial for generating effective antibody responses and cytotoxic T lymphocyte (CTL) memory during influenza infection and vaccination. Studying this epitope has been fundamental to understanding adaptive immunity to viral pathogens and HLA-restricted immune recognition.



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