

# Biotinylated Human HLA-A\*02:01&B2M&EBV LMP1 (YLLEMLWRL) Complex Protein (Monomer, MALS verified)

Catalog # HLP-H82Ec



BIOSYSTEMS  
**Acro**

## Synonym

HLA-A\*0201 & B2M & EBV LMP1 (YLLEMLWRL)

## Source

Biotinylated Human HLA-A\*02:01&B2M&EBV LMP1 (YLLEMLWRL) Complex Protein(HLP-H82Ec) is expressed from human 293 cells (HEK293). It contains AA Gly 25 - Ile 308 (HLA-A\*02:01) & Ile 21 - Met 119 (B2M) & YLLEMLWRL peptide (Accession # [AAA59606.1](#) (HLA-A\*02:01) & [P61769-1](#) (B2M) & YLLEMLWRL).

Predicted N-terminus: Gly 25 & Ile 21

## Molecular Characterization

Biotinylated Human HLA-A\*02:01&B2M&EBV LMP1 (YLLEMLWRL) Complex Protein is produced by co-expression of HLA and B2M loaded with EBV LMP1 peptide.

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

The protein has a calculated MW of 36.3 kDa and 11.7 kDa. The protein migrates as 40-43 kDa and 10 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.*

## Protein Ratio

Passed as determined by the HABA assay / binding ELISA.

## Endotoxin

Less than 1.0 EU per µg by the LAL method.

## 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.*

## Storage

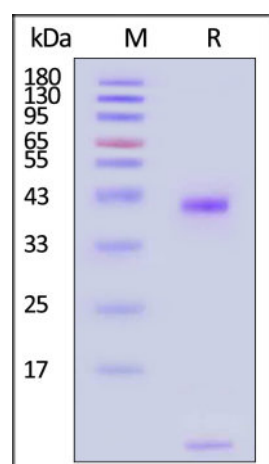
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

*Please avoid repeated freeze-thaw cycles.*

This product is stable after storage at:

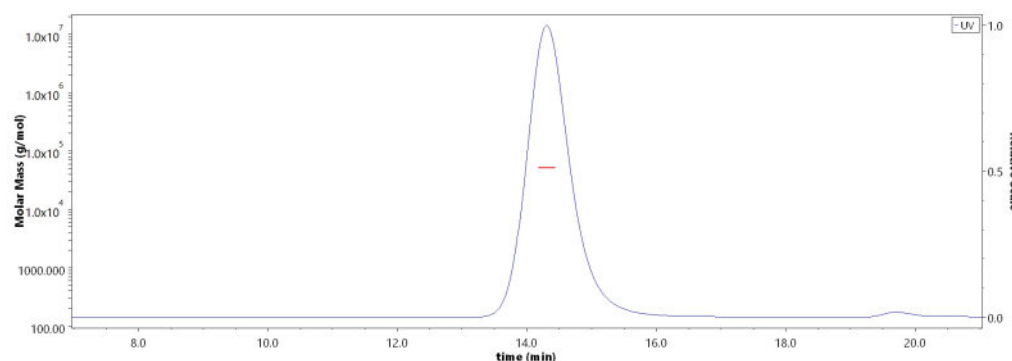
- -20°C to -70°C for 12 months in lyophilized state;
- -70°C for 3 months under sterile conditions after reconstitution.

## SDS-PAGE



Biotinylated Human HLA-A\*02:01&B2M&EBV LMP1 (YLLEMLWRL) Complex Protein on SDS-PAGE under reducing (R) condition. The gel was

## SEC-MALS



The purity of Biotinylated Human HLA-A\*02:01&B2M&EBV LMP1 (YLLEMLWRL) Complex Protein (Cat. No. HLP-H82Ec) is more than 90%

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2/4/2024

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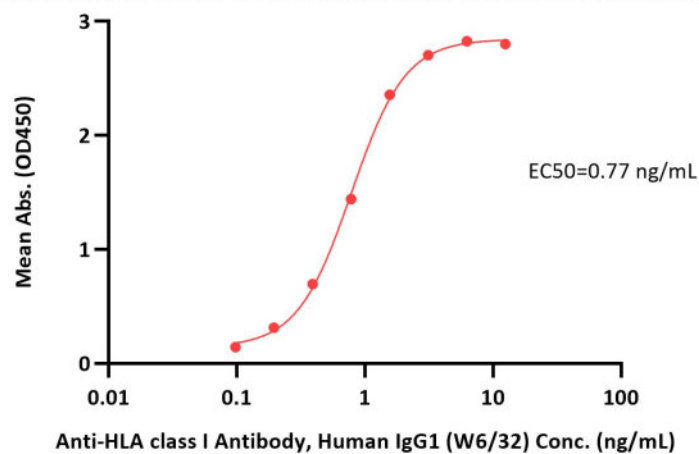
stained with Coomassie Blue. The purity of the protein is greater than 90% (With [Star Ribbon Pre-stained Protein Marker](#)).

and the molecular weight of this protein is around 45-60 kDa verified by SEC-MALS.

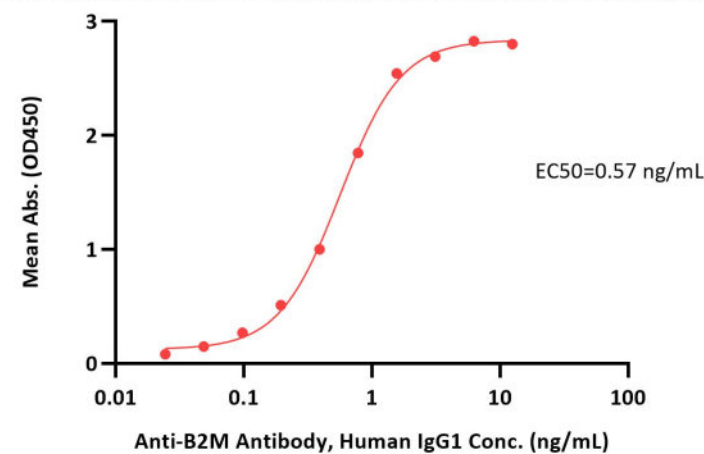
[Report](#)

## Bioactivity-ELISA

**Biotinylated Human HLA-A\*02:01&B2M&EBV LMP1 (YLLEMLWRL) Complex Protein ELISA**  
0.1 µg of Biotinylated Human HLA-A\*02:01&B2M&EBV LMP1 (YLLEMLWRL) Complex Protein per well



**Biotinylated Human HLA-A\*02:01&B2M&EBV LMP1 (YLLEMLWRL) Complex Protein ELISA**  
0.1 µg of Biotinylated Human HLA-A\*02:01&B2M&EBV LMP1 (YLLEMLWRL) Complex Protein per well



Immobilized Biotinylated Human HLA-A\*02:01&B2M&EBV LMP1 (YLLEMLWRL) Complex Protein (Cat. No. HLP-H82Ec) at 1 µg/mL (100 µL/well) on streptavidin (Cat. No. STN-N5116) precoated (0.5 µg/well) plate can bind Anti-HLA class I Antibody, Human IgG1 (W6/32) with a linear range of 0.1-1.5 ng/mL (QC tested).

Immobilized Biotinylated Human HLA-A\*02:01&B2M&EBV LMP1 (YLLEMLWRL) Complex Protein (Cat. No. HLP-H82Ec) at 1 µg/mL (100 µL/well) on streptavidin (Cat. No. STN-N5116) precoated (0.5 µg/well) plate can bind Anti-B2M Antibody, Human IgG1 with a linear range of 0.02-0.8 ng/mL (Routinely tested).

## Background

Epstein-Bar Virus (EBV), also known as human herpesvirus 4, belongs to gamma herpes virus family and is a very common human virus worldwide. EBV causes infectious mononucleosis (IM) and also associates to some specific types of cancers such as Burkitt's lymphoma (BL) and gastric carcinoma (GC). Glycoprotein B (gB) plays an important role in viral entry by binding with  $\alpha\beta6/\alpha\beta8$  integrins to trigger the membrane fusion and entry process of epithelial cells, which makes it become a great target for EBV research. Epstein-Bar Virus (EBV), also known as human herpesvirus 4, belongs to gamma herpes virus family and is a very common human virus worldwide. EBV causes infectious mononucleosis (IM) and also associates to some specific types of cancers such as Burkitt's lymphoma (BL) and gastric carcinoma (GC). Glycoprotein B (gB) plays an important role in viral entry by binding with  $\alpha\beta6/\alpha\beta8$  integrins to trigger the membrane fusion and entry process of epithelial cells, which makes it become a great target for EBV research. The Human HLA-A\*0201 EBV LMP1 (YLLEMLWRL) complex protein is a complex of HLA-A\*0201 of the MHC Class I, B2M and YLLEMLWRL peptide of the EBV LMP1.

## Clinical and Translational Updates

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