

# Biotinylated Human HLA-A\*02:01&B2M&MAGE-A3 (KVAELVHFL) Complex Protein (Monomer, MALS verified)

Catalog # HLM-H82E3



BIOSYSTEMS  
**Acro**

## Synonym

HLA-A\*0201 | B2M | MAGE-A3

## Source

Biotinylated Human HLA-A\*02:01&B2M&MAGE-A3 (KVAELVHFL) Complex Protein(HLM-H82E3) is expressed from human 293 cells (HEK293). It contains AA Gly 25 - Ile 308 (HLA-A\*02:01) & Ile 21 - Met 119 (B2M) & KVAELVHFL peptide (Accession # [AAA59606.1](#) (HLA-A\*02:01) & [P61769-1](#) (B2M) & KVAELVHFL).

Predicted N-terminus: Gly 25 & Ile 21

## Molecular Characterization

Biotinylated Human HLA-A\*02:01&B2M&MAGE-A3 (KVAELVHFL) Complex Protein is produced by co-expression of HLA and B2M loaded with MAGE-A3 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 38-44 kDa and 12 kDa 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.

>95% 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

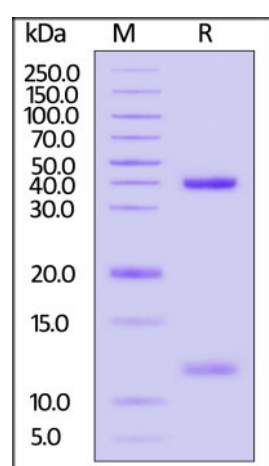
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

*Please avoid repeated freeze-thaw cycles.*

This product is stable after storage at:

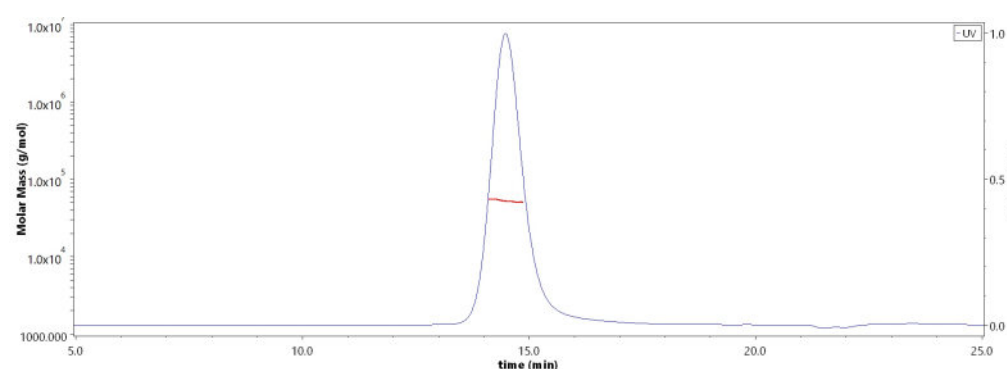
- -20°C to -70°C for 12 months in lyophilized state;
- -70°C for 3 months under sterile conditions after reconstitution.

## SDS-PAGE



Biotinylated Human HLA-A\*02:01&B2M&MAGE-A3 (KVAELVHFL) 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%.

## SEC-MALS



The purity of Biotinylated Human HLA-A\*02:01&B2M&MAGE-A3 (KVAELVHFL) Complex Protein (Cat. No. HLM-H82E3) is more than 95% and the molecular weight of this protein is around 45-60 kDa verified by SEC-MALS.

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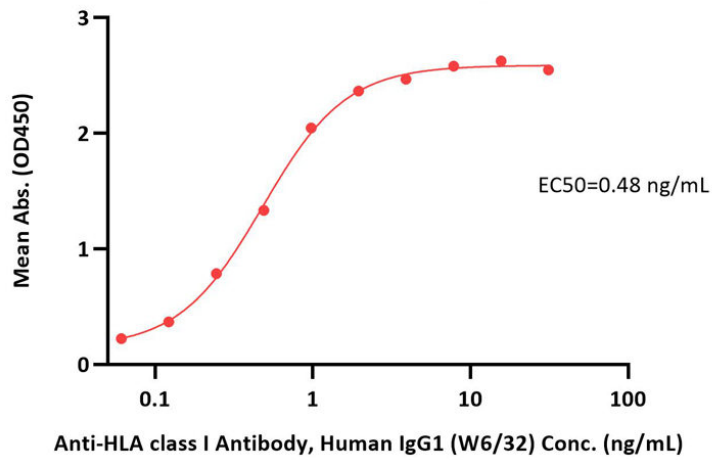
11/15/2023



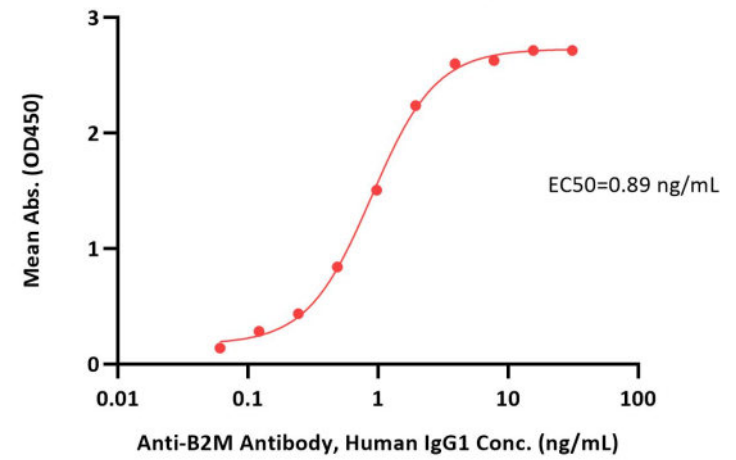
Report

**Bioactivity-ELISA**

**Biotinylated Human HLA-A\*02:01&B2M&MAGE-A3 (KVAELVHFL) Complex Protein ELISA**  
0.1 µg of Biotinylated Human HLA-A\*02:01&B2M&MAGE-A3 (KVAELVHFL) Complex Protein per well



**Biotinylated Human HLA-A\*02:01&B2M&MAGE-A3 (KVAELVHFL) Complex Protein ELISA**  
0.1 µg of Biotinylated Human HLA-A\*02:01&B2M&MAGE-A3 (KVAELVHFL) Complex Protein per well



Immobilized Biotinylated Human HLA-A\*02:01&B2M&MAGE-A3 (KVAELVHFL) Complex Protein (Cat. No. HLM-H82E3) 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 ng/mL (QC tested).

Immobilized Biotinylated Human HLA-A\*02:01&B2M&MAGE-A3 (KVAELVHFL) Complex Protein (Cat. No. HLM-H82E3) 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 0.1-2 ng/mL (Routinely tested).

**Background**

The MAGE-A3 antigen is a cancer-testis antigen and is expressed intracellularly in various solid tumor tissues, MAGE-A3 112-120 peptide (KVAELVHFL) is a cytotoxic T lymphocyte (CTL) epitope presented by HLA-A\*0201. The Human HLA-A\*0201 MAGE-A3 (KVAELVHFL) complex protein is a complex of HLA-A\*0201 of the MHC Class I, B2M, and KVAELVHFL peptide of the MAGE-A3.

**Clinical and Translational Updates**

Please contact us via [TechSupport@acrobiosystems.com](mailto:TechSupport@acrobiosystems.com) if you have any question on this product.

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