Biotinylated Human HLA-A*02:01&B2M&HPV16-E7 (YMLDLQPET) Complex Protein (Monomer, MALS verified)

Catalog # HL7-H82E5

Synonym

HLA-A*0201 & B2M & HPV16-E7 (YMLDLQPET)

Source

Biotinylated Human HLA-A*02:01&B2M&HPV16-E7 (YMLDLQPET) Complex Protein(HL7-H82E5) is expressed from human 293 cells (HEK293). It contains AA Gly 25 - Ile 308 (HLA-A*02:01) & Ile 21 - Met 119 (B2M) & YMLDLQPET peptide (Accession # AAA59606.1 (HLA-A*02:01) & P61769-1 (B2M) & YMLDLQPET).
Predicted N-terminus: Gly 25 & Ile 21

Molecular Characterization

Biotinylated Human HLA-A*02:01&B2M&HPV16-E7 (YMLDLQPET) Complex Protein is produced by co-expression of HLA and B2M loaded with HPV16-E7 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 12 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.

Storage

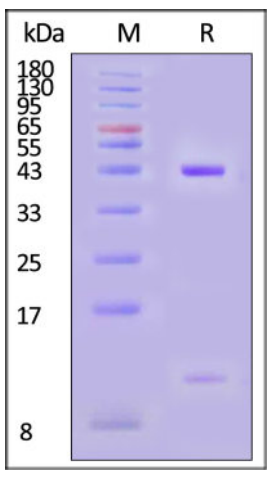
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

Please avoid repeated freeze-thaw cycles.

This product is stable after storage at:

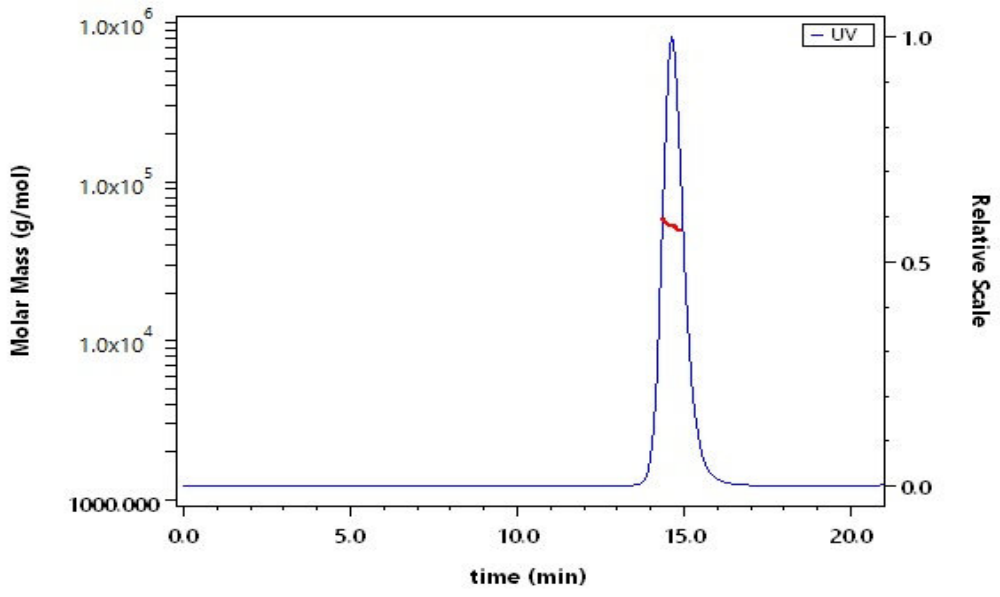
- -20°C to -70°C for 12 months in lyophilized state;
- -70°C for 3 months under sterile conditions after reconstitution.

SDS-PAGE



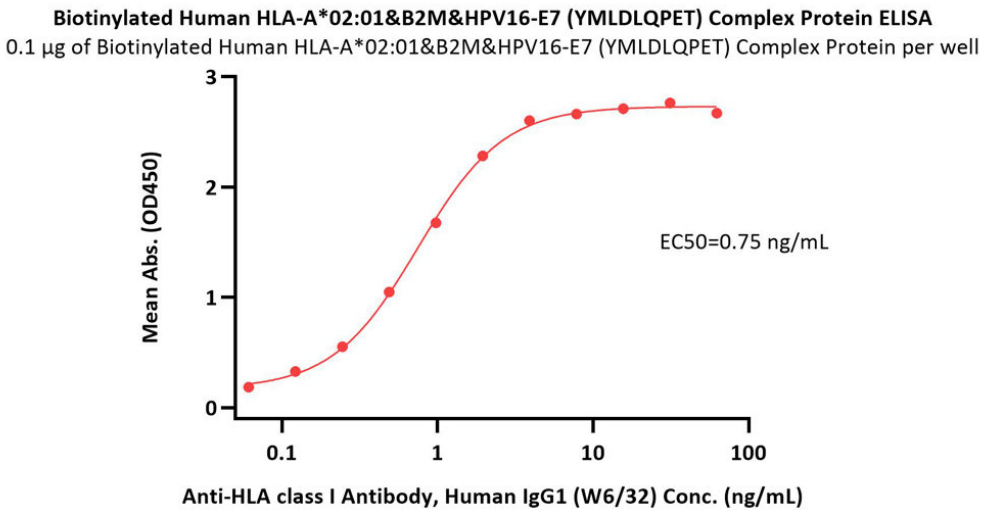
Biotinylated Human HLA-A*02:01&B2M&HPV16-E7 (YMLDLQPET) Complex Protein on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 90% (With Star Ribbon Pre-stained Protein Marker).

SEC-MALS

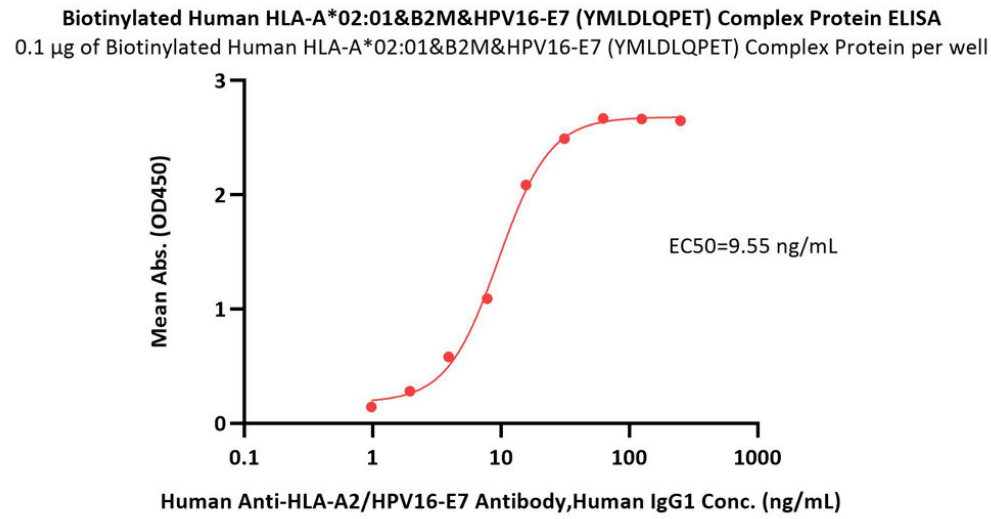


The purity of Biotinylated Human HLA-A*02:01&B2M&HPV16-E7 (YMLDLQPET) Complex Protein (Cat. No. HL7-H82E5) is more than 90% and the molecular weight of this protein is around 40-60 kDa verified by SEC-MALS.
Report

Bioactivity-ELISA



Immobilized Biotinylated Human HLA-A*02:01&B2M&HPV16-E7 (YMLDLQPET) Complex Protein (Cat. No. HL7-H82E5) 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 0.1-2 ng/mL (QC tested).



Immobilized Biotinylated Human HLA-A*02:01&B2M&HPV16-E7 (YMLDLQPET) Complex Protein (Cat. No. HL7-H82E5) at 1 μg/mL (100 μL/well) on streptavidin (Cat. No. STN-N5116) precoated (0.5 μg/well) plate can bind Human Anti-HLA-A2/HPV16-E7 Antibody, Human IgG1 with a linear range of 0.9-16 ng/mL (QC tested).

Background

Human papillomavirus (HPV) is A kind of papillomavirus belonging to the milk polypoid virus family. It is a spherical DNA virus, which can cause the proliferation of squamous epithelium of human skin mucosa. HPV(human papillomavirus) for common warts, genital warts (condyloma acuminatum), and other symptoms. There are many types of human papillomavirus (HPV), with HPV 16 and 18 being high-risk types known to significantly increase the risk of cervical, vaginal and vulvar cancers in women and men. The human HLA-A*0201 HPV (YMLDLQPET) tetramer protein is a complex of HLA-A*0201 of the MHC Class I, B2M, and YMLDLQPET peptide of the HPV.