Biotinylated Human HLA-A*02:01&B2M&NY-ESO-1 (SLLMWITQV) Complex Protein (Monomer, MALS verified)

Catalog # HL1-H82E4

Synonym

HLA-A*02:01 & B2M & NY-ESO-1

Source

Biotinylated Human HLA-A*02:01&B2M&NY-ESO-1 (SLLMWITQV) Complex Protein(HL1-H82E4) is expressed from human 293 cells (HEK293). It contains AA Gly 25 - Ile 308 (HLA-A*02:01) & Ile 21 - Met 119 (B2M) & SLLMWITQV peptide (Accession # AAA59606.1 (HLA-A*02:01) & P61769 (B2M) & SLLMWITQV).
Predicted N-terminus: Gly 25 & Ser

Molecular Characterization

Biotinylated Human HLA-A*02:01&B2M&NY-ESO-1 (SLLMWITQV) Complex Protein is produced by co-expression of HLA and B2M loaded with NY-ESO-1 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 13.8 kDa. The protein migrates as 42-45 kDa and 14 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

>95% 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

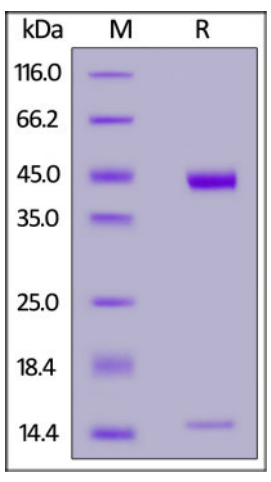
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

Please avoid repeated freeze-thaw cycles.

This product is stable after storage at:

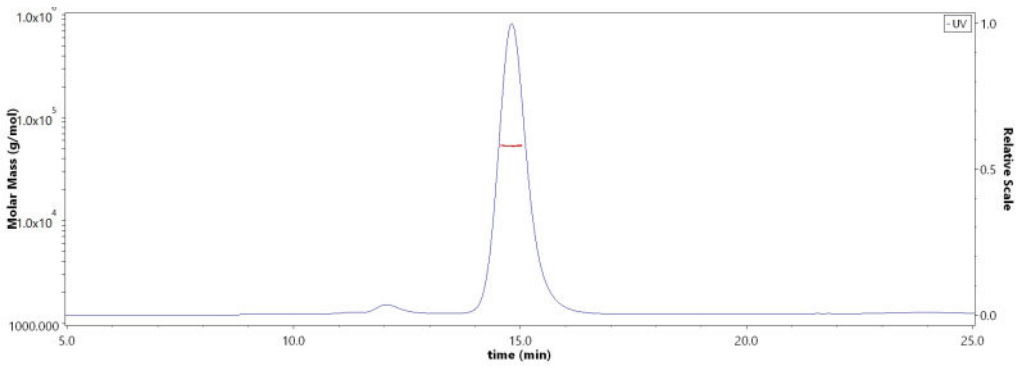
- -20°C to -70°C for 12 months in lyophilized state;
- -70°C for 3 months under sterile conditions after reconstitution.

SDS-PAGE



Biotinylated Human HLA-A*02:01&B2M&NY-ESO-1 (SLLMWITQV) Complex Protein on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 95%.

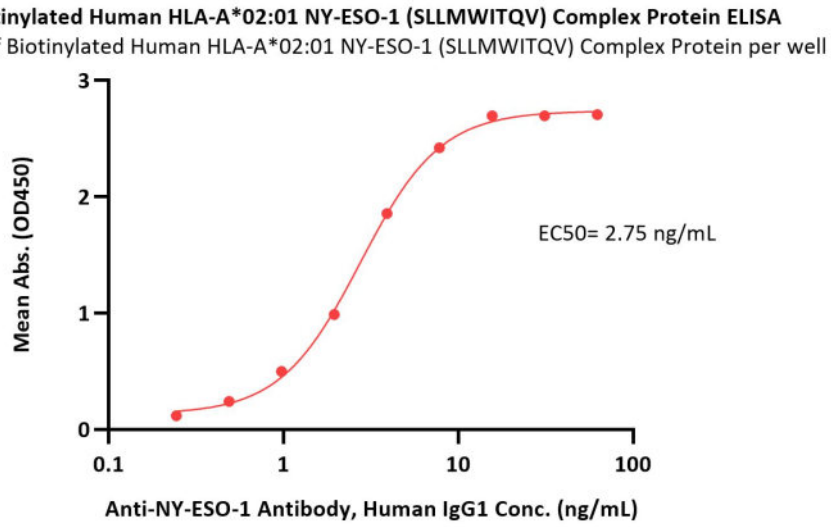
SEC-MALS



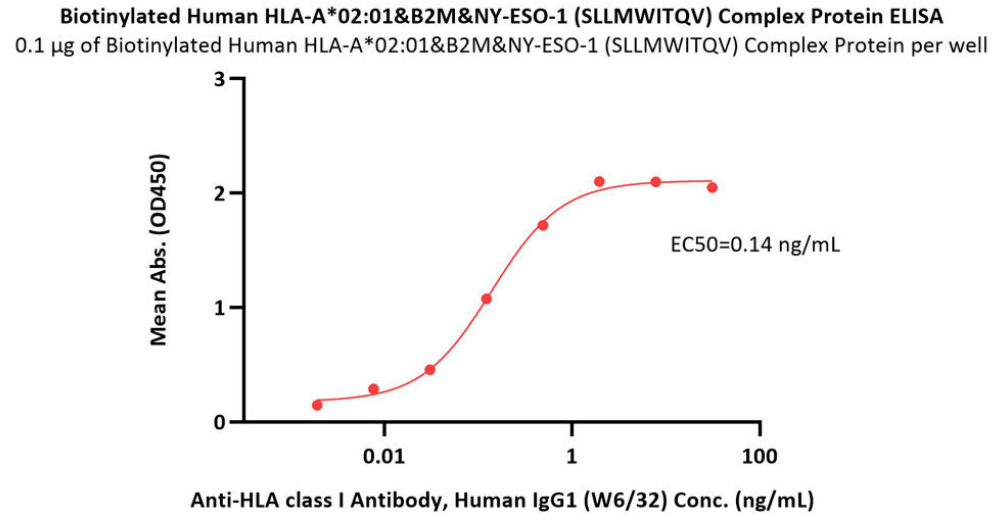
The purity of Biotinylated Human HLA-A*02:01&B2M&NY-ESO-1 (SLLMWITQV) Complex Protein (Cat. No. HL1-H82E4) is more than 90% and the molecular weight of this protein is around 44-60 kDa verified by SEC-MALS.

Report

Bioactivity-ELISA

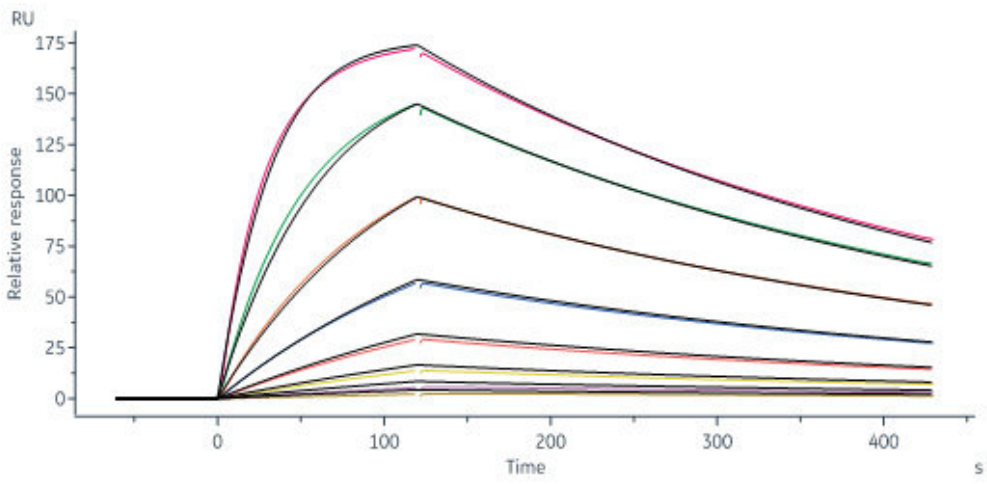


Immobilized Biotinylated Human HLA-A*02:01&B2M&NY-ESO-1 (SLLMWITQV) Complex Protein (Cat. No. HL1-H82E4) at 1 μg/mL (100 μL/well) on streptavidin (Cat. No. STN-N5116) precoated (0.5 μg/well) plate can bind Anti-NY-ESO-1 Antibody, Human IgG1 with a linear range of 0.2-16 ng/mL (QC tested).



Immobilized Biotinylated Human HLA-A*02:01&B2M&NY-ESO-1 (SLLMWITQV) Complex Protein (Cat. No. HL1-H82E4) 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 (Routinely tested).

Bioactivity-SPR



Anti-NY-ESO-1 antibody captured on CM5 chip via Anti-human IgG Fc antibodies surface can bind Biotinylated Human HLA-A*02:01&B2M&NY-ESO-1 (SLLMWITQV) Complex Protein (Cat. No. HL1-H82E4) with an affinity constant of 8.36 nM as determined in a SPR assay (Biacore 8K) (QC tested).

Background

NY-ESO-1, which is also well-known as New York esophageal squamous cell carcinoma 1, is an efficient target for cancer immunotherapy. This antigen is a member of cancer-testis antigens (CTAs) and is highly expressed in various cancers, including melanoma, ovarian, cervical cancer, etc. Adoptive T cell therapy with HLA-A2 restricted NY-ESO-1 transduced CD8+ T cells has improved the clinical response rates and overall survival of treatment-refractory melanoma patients. The Human HLA-A*0201 NY-ESO-1 (SLLMWITQV) complex protein is a complex of HLA-A*0201 of the MHC Class I, B2M and SLLMWITQV peptide of the NY-ESO-1.

Clinical and Translational Updates