Biotinylated Human HLA-A*02:01&B2M&AFP (FMNKFIYEI) Complex Protein (Monomer, MALS verified)

Catalog # HLA-H82E3

Synonym

HLA-A*0201 & B2M & AFP (FMNKFIYEI)

Source

Biotinylated Human HLA-A*02:01&B2M&AFP (FMNKFIYEI) Complex Protein(HLA-H82E3) is expressed from human 293 cells (HEK293). It contains AA Gly 25 - Ile 308 (HLA-A*02:01) & Ile 21 - Met 119 (B2M) & FMNKFIYEI peptide (Accession # AAA59606.1 (HLA-A*02:01) & P61769 (B2M) & FMNKFIYEI).
Predicted N-terminus: Gly 25 & Ile 21 & Phe

Molecular Characterization

Biotinylated Human HLA-A*02:01&B2M&AFP (FMNKFIYEI) Complex Protein is produced by co-expression of HLA and B2M loaded with AFP 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, 11.7 kDa and 1.2 kDa. The protein migrates as 41-45 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.

Purity

>95% 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

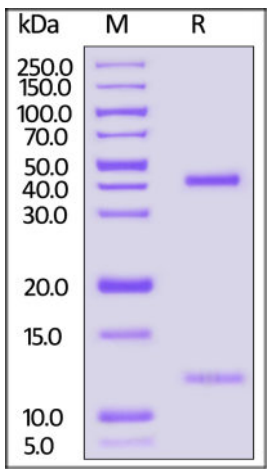
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

Please avoid repeated freeze-thaw cycles.

This product is stable after storage at:

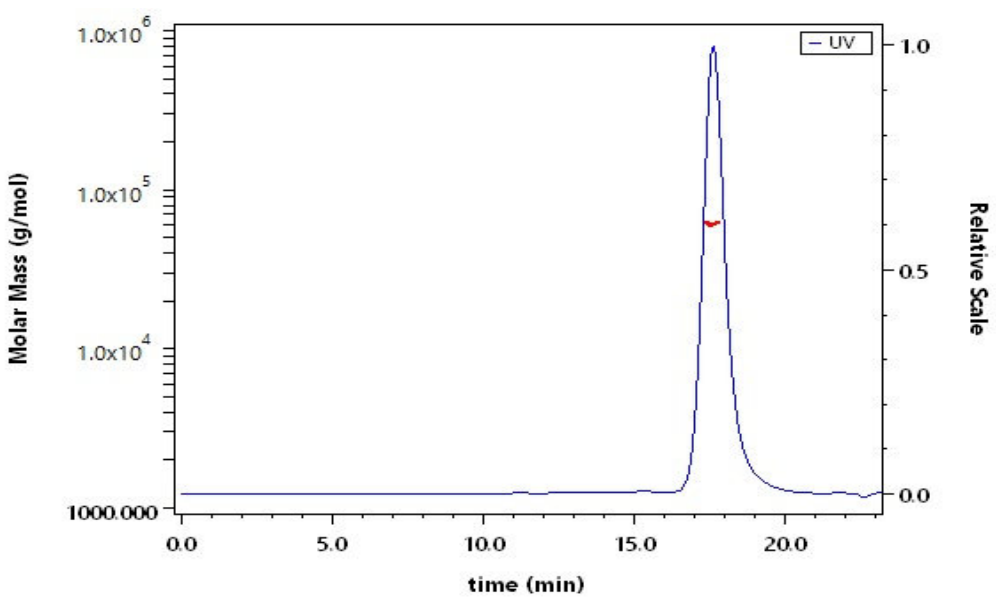
- -20°C to -70°C for 12 months in lyophilized state;
- -70°C for 3 months under sterile conditions after reconstitution.

SDS-PAGE



Biotinylated Human HLA-A*02:01&B2M&AFP (FMNKFIYEI) 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

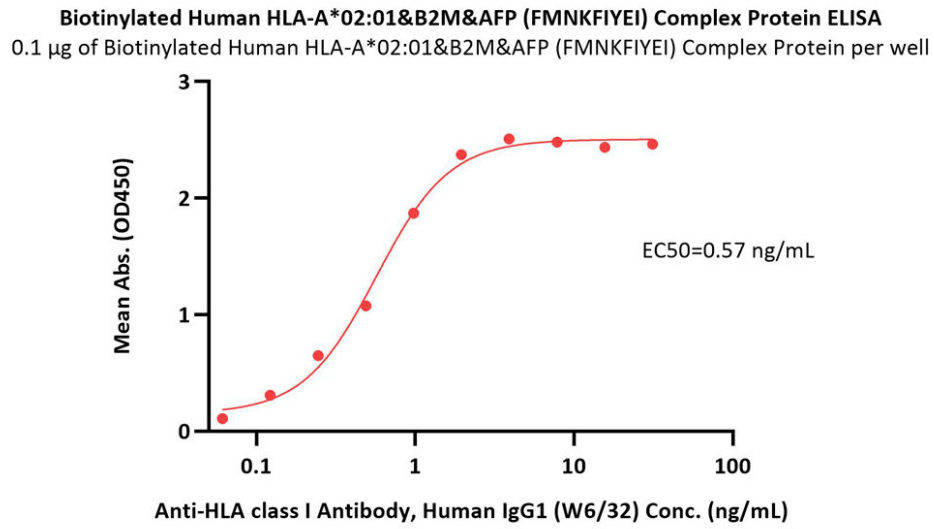


The purity of Biotinylated Human HLA-A*02:01&B2M&AFP (FMNKFIYEI) Complex Protein (Cat. No. HLA-H82E3) is more than 95% and the molecular weight of this protein is around 48-63 kDa verified by SEC-MALS.
Report

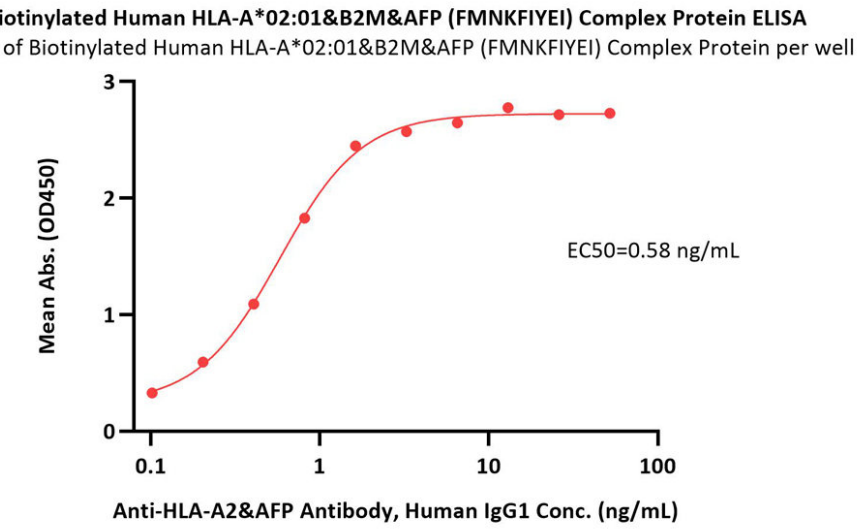
Bioactivity-ELISA

Biotinylated Human HLA-A*02:01&B2M&AFP (FMNKFIYEI) Complex Protein (Monomer, MALS verified)

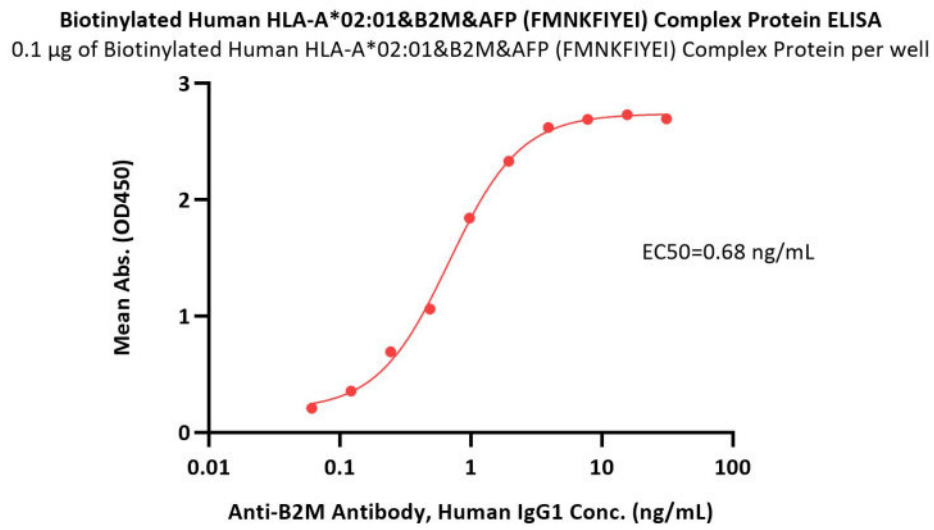
Catalog # HLA-H82E3



Immobilized Biotinylated Human HLA-A*02:01&B2M&AFP (FMNKFIYEI) Complex Protein (Cat. No. HLA-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 0.1-2 ng/mL (QC tested).

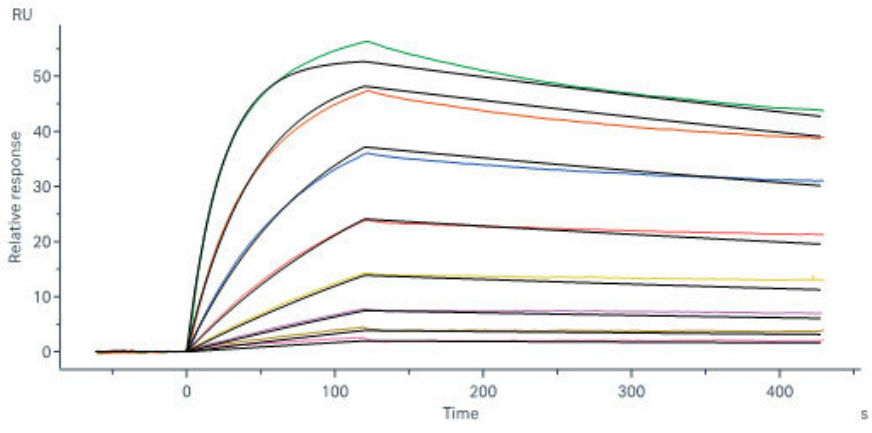


Immobilized Biotinylated Human HLA-A*02:01&B2M&AFP (FMNKFIYEI) Complex Protein (Cat. No. HLA-H82E3) at 1 μg/mL (100 μL/well) on streptavidin (Cat. No. STN-N5116) precoated (0.5 μg/well) plate can bind Anti-HLA-A2&AFP Antibody, Human IgG1 with a linear range of 0.1-2 ng/mL (QC tested).



Immobilized Biotinylated Human HLA-A*02:01&B2M&AFP (FMNKFIYEI) Complex Protein (Cat. No. HLA-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 0.1-1 ng/mL (Routinely tested).

Bioactivity-SPR



Biotinylated Human HLA-A*02:01&B2M&AFP (FMNKFIYEI) Complex Protein (Cat. No. HLA-H82E3) captured on Biotin CAP-Series S Sensor Chip

can bind Anti-HLA-A2&AFP Antibody, with an affinity constant of 3.28 nM
as determined in a SPR assay (Biacore 8K) (Routinely tested).

Background

Alpha-fetoprotein is found in monomeric as well as dimeric and trimeric forms and binds copper, nickel, fatty acids, and bilirubin. The level of alpha-fetoprotein in amniotic fluid is used to measure renal loss of protein to screen for spina bifida and anencephaly. The Human HLA-A*0201 AFP (FMNKFIYEI) complex protein is a complex of HLA-A*0201 of the MHC Class I, B2M, and FMNKFIYEI peptide of the AFP.