Synonym

HLA-A*02:01 & B2M & WT-1

Source

Human HLA-A*02:01&B2M&WT-1 (RMFPNAPYL) Tetramer Protein(HLW-H52E6) is expressed from human 293 cells (HEK293). It contains AA Gly 25 - Thr 305 (HLA-A*02:01) & Ile 21 - Met 119 (B2M) & RMFPNAPYL peptide (Accession # AAA59606.1 (HLA-A*02:01) & P61769 (B2M) & RMFPNAPYL).
Predicted N-terminus: Gly 25 & Arg

Molecular Characterization

Human HLA-A*02:01&B2M&WT-1 (RMFPNAPYL) Tetramer Protein is assembled by biotinylated monomer (HLW-H82E5) and streptavidin.

Biotinylated Human HLA-A*02:01&B2M&WT-1 (RMFPNAPYL) Complex Protein is produced by co-expression of HLA and B2M loaded with WT-1 peptide. Biotinylated Human HLA-A*02:01&B2M&WT-1 (RMFPNAPYL) Complex Protein carries a polyhistidine tag at the C-terminus, followed by an Avi tag (Avitag™).

The protein has a calculated MW of 36.0 kDa and 13.8 kDa. The protein migrates as 42-45 kDa, 15 kDa and 14 kDa under reducing (R) condition (SDS-PAGE) due to glycosylation.

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

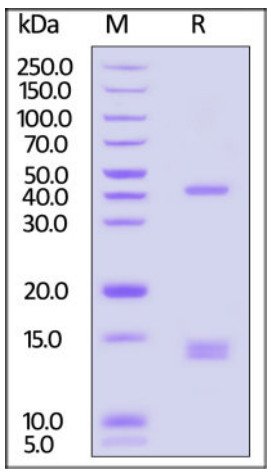
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

Please avoid repeated freeze-thaw cycles.

This product is stable after storage at:

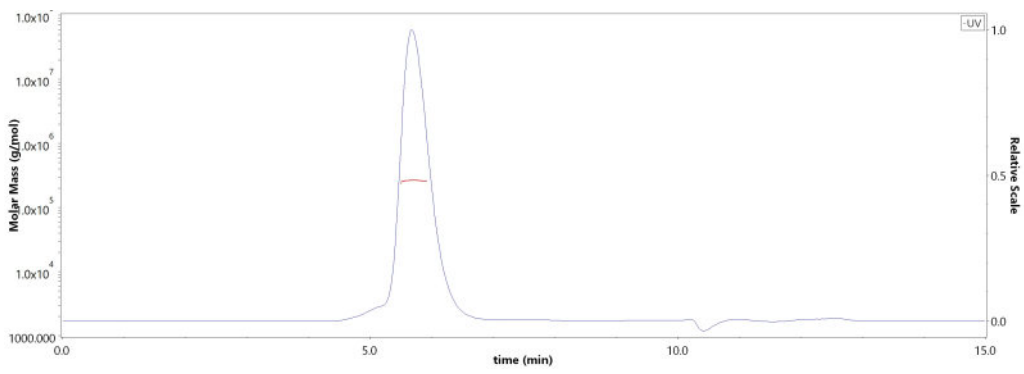
- -20°C to -70°C for 12 months in lyophilized state;
- -70°C for 3 months under sterile conditions after reconstitution.

SDS-PAGE



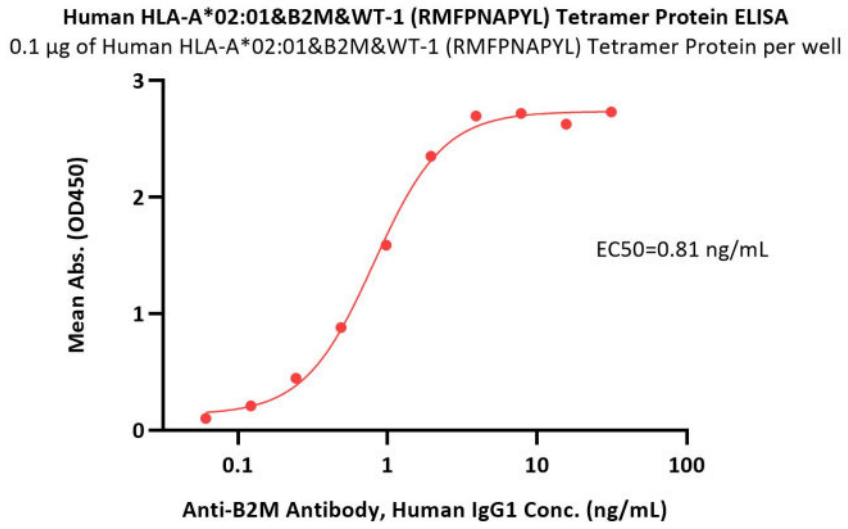
Human HLA-A*02:01&B2M&WT-1 (RMFPNAPYL) Tetramer Protein on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 90%.

SEC-MALS



The purity of Human HLA-A*02:01&B2M&WT-1 (RMFPNAPYL) Tetramer Protein (Cat. No. HLW-H52E6) is more than 90% and the molecular weight of this protein is around 250-295 kDa verified by SEC-MALS.
Report

Bioactivity-ELISA



Immobilized Human HLA-A*02:01&B2M&WT-1 (RMFPNAPYL) Tetramer Protein (Cat. No. HLW-H52E6) at 1 μg/mL (100 μL/well) can bind Anti-B2M Antibody, Human IgG1 with a linear range of 0.1-2 ng/mL (Routinely tested).

Background

Wilms tumor gene 1 (WT1)，is an attractive target antigen for leukemia and solid cancer. WT1-specific adoptive immunotherapy has developed for tumor treatment in recent years. WT1 has been proved wildly expressed in breast, colon and ovarian cancer. It participates in cell growth, differentiation and apoptosis regulation. The WT1127-134 (RMFPNAPYL) was shown to be recognized by HLA-A*0201 tumor-infiltrating lymphocytes from melanoma patients, and therefore it is widely been studied in TCR-T studies. The Human HLA-A*0201 WT-1 (RMFPNAPYL) complex Protein is a complex of HLA-A*0201 of the MHC Class I, B2M and RMFPNAPYL peptide of the WT-1.

Clinical and Translational Updates