Biotinylated Human immunodeficiency virus 1 gp140 Protein, His,Avitag™ (MALS verified)

Catalog # GP0-V82E3

Source

Biotinylated Human immunodeficiency virus 1 gp140 Protein, His,Avitag(GP0-V82E3) is expressed from human 293 cells (HEK293). It contains AA Ala 30 - Asp 661 (Accession # ABA61516.1).
Predicted N-terminus: Ala 30

Molecular Characterization

This protein carries a polyhistidine tag at the C-terminus, followed by an Avi tag (Avitag™).

The protein has a calculated MW of 53.8 kDa & 20.9 kDa. The protein migrates as 95-120 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.

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.

Formulation

Lyophilized from 0.22 μm filtered solution in PBS 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

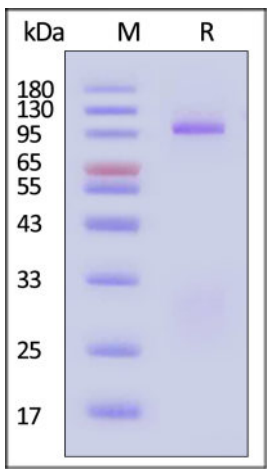
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

Please avoid repeated freeze-thaw cycles.

This product is stable after storage at:

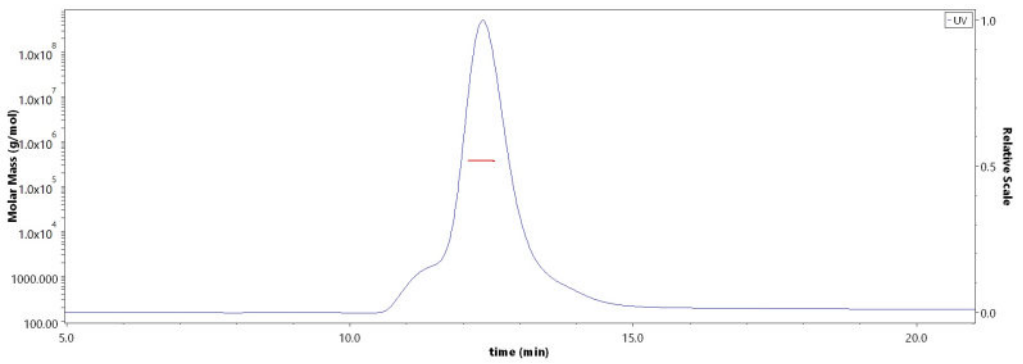
- -20°C to -70°C for 12 months in lyophilized state;
- -70°C for 3 months under sterile conditions after reconstitution.

SDS-PAGE



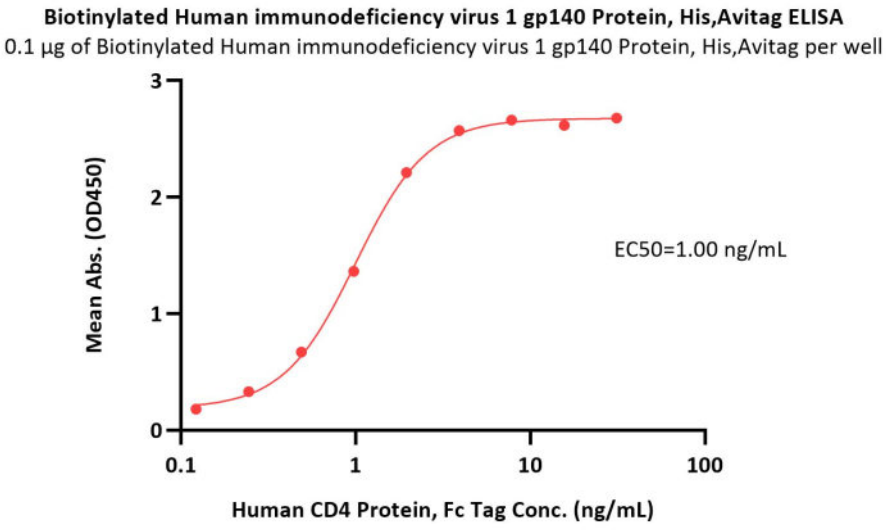
Biotinylated Human immunodeficiency virus 1 gp140 Protein, His,Avitag on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 90% (With Star Ribbon Pre-stained Protein Marker).

SEC-MALS



The purity of Biotinylated Human immunodeficiency virus 1 gp140 Protein, His,Avitag (Cat. No. GP0-V82E3) is more than 85% and the molecular weight of this protein is around 355-385 kDa verified by SEC-MALS.
Report

Bioactivity-ELISA



Immobilized Biotinylated Human immunodeficiency virus 1 gp140 Protein, His,Avitag (Cat. No. GP0-V82E3) at 1 μg/mL (100 μL/well) on streptavidin (Cat. No. STN-N5116) precoated (0.5 μg/well) plate can bind Human CD4 Protein, Fc Tag (Cat. No. CD4-H5259) with a linear range of 0.1-2 ng/mL (QC tested).

Background

The trimeric envelope glycoproteins (Env) that are displayed on human and simian immunodeficiency viruses (HIV and SIV, respectively) are heterodimers of the transmembrane glycoprotein (gp41) and a surface glycoprotein (gp120). The glycoproteins gp120 and gp41 are synthesized initially as a single gp160 polypeptide that is subsequently cleaved to generate the noncovalently associated gp120/gp41 complex. Soluble versions of trimeric gp140, either cleaved or uncleaved, are being developed as immunogens to elicit a protective humoral immune response against HIV-1 infection.

Clinical and Translational Updates