

Synonym

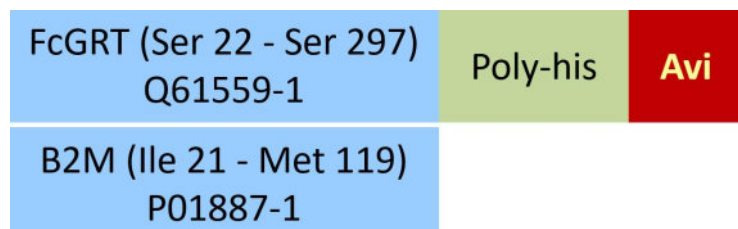
FcRn,FCGRT & B2M

Source

Biotinylated Mouse FCGRT&B2M Heterodimer Protein, His,Avitag (FCM-M82W5) is expressed from human 293 cells (HEK293). It contains AA Ser 22 - Ser 297 (FCGRT) & Ile 21 - Met 119 (B2M) (Accession # [Q61559-1](#)(FCGRT) & [P01887-1](#)(B2M)).

Predicted N-terminus: Ser 22 (FCGRT) & Ile 21 (B2M)

Molecular Characterization



Biotinylated Mouse FCGRT&B2M Heterodimer Protein, His,Avitag, produced by co-expression of FCGRT and B2M, has a calculated MW of 34.9 kDa (FCGRT) and 11.6 kDa (B2M). Subunit FCGRT is fused with a polyhistidine tag at the C-terminus, followed by an Avi tag (Avitag™) and subunit Beta-2 microglobulin (B2M) contains no tag at the C-terminus. The reducing (R) protein migrates as 45-55 kDa (FCGRT) and 13 kDa (B2M) respectively due to glycosylation.

Biotinylation

Biotinylation of this product is performed using Avitag™ technology. Briefly, the single lysine residue in the Avitag is enzymatically labeled with biotin.

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. Normally trehalose is added as protectant before lyophilization.

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

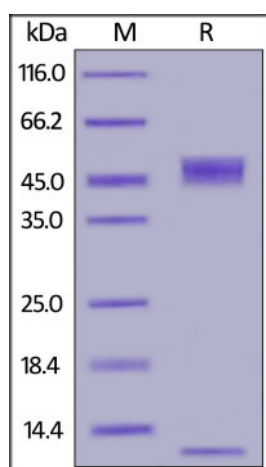
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

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.

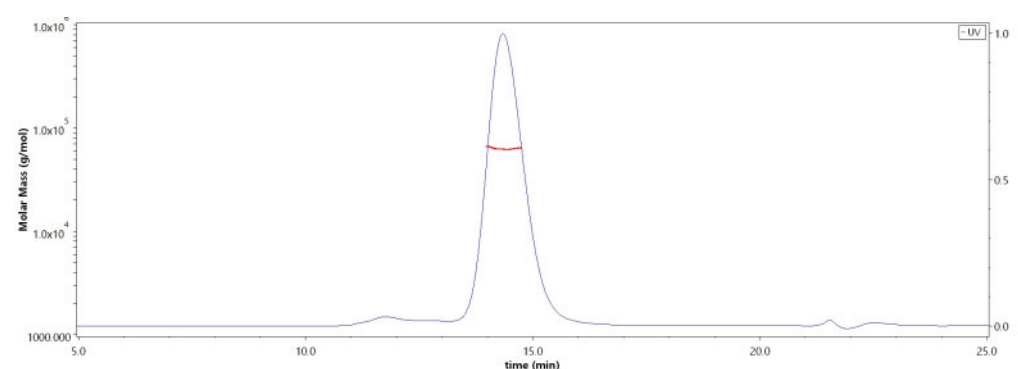
SDS-PAGE



Biotinylated Mouse FCGRT&B2M Heterodimer Protein, His,Avitag on SDS-PAGE under reducing (R) condition. The gel was stained overnight with Coomassie Blue. The purity of the protein is greater than 95%.

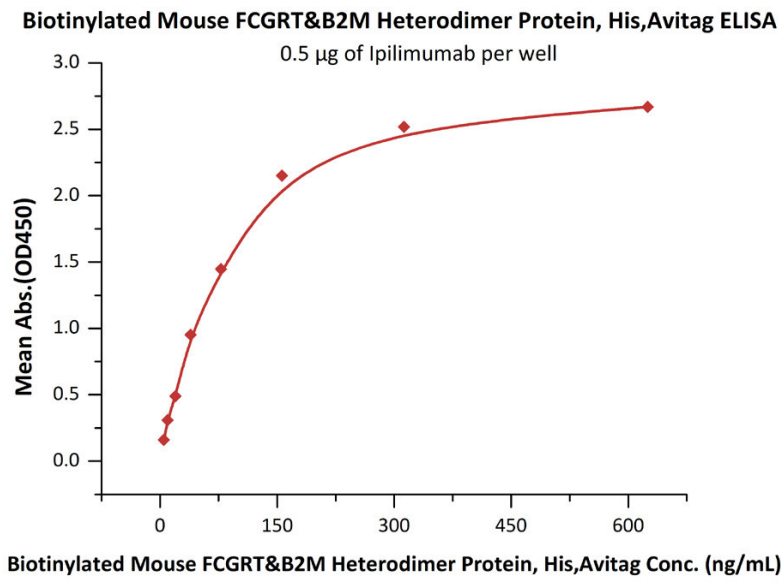
Bioactivity-ELISA

SEC-MALS



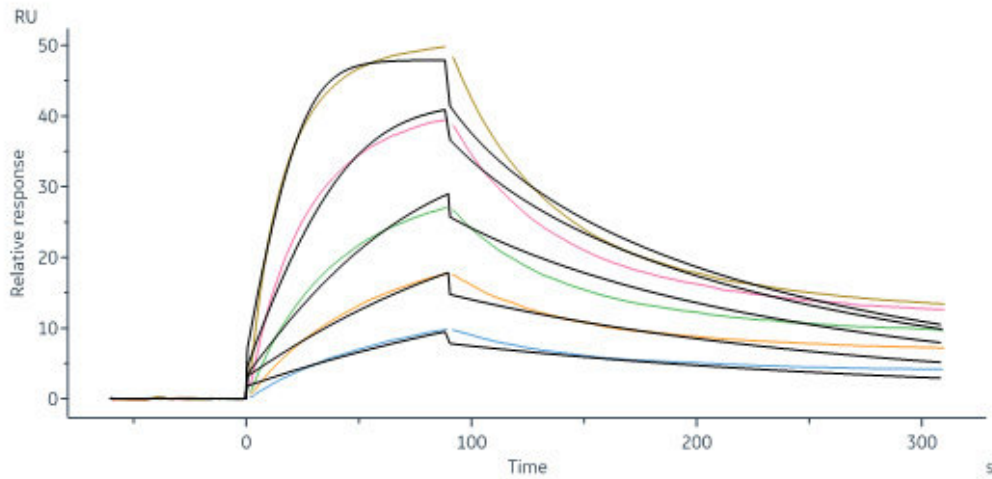
The purity of Biotinylated Mouse FCGRT&B2M Heterodimer Protein, His,Avitag (Cat. No. FCM-M82W5) is more than 90% and the molecular weight of this protein is around 55-65 kDa verified by SEC-MALS.

[Report](#)

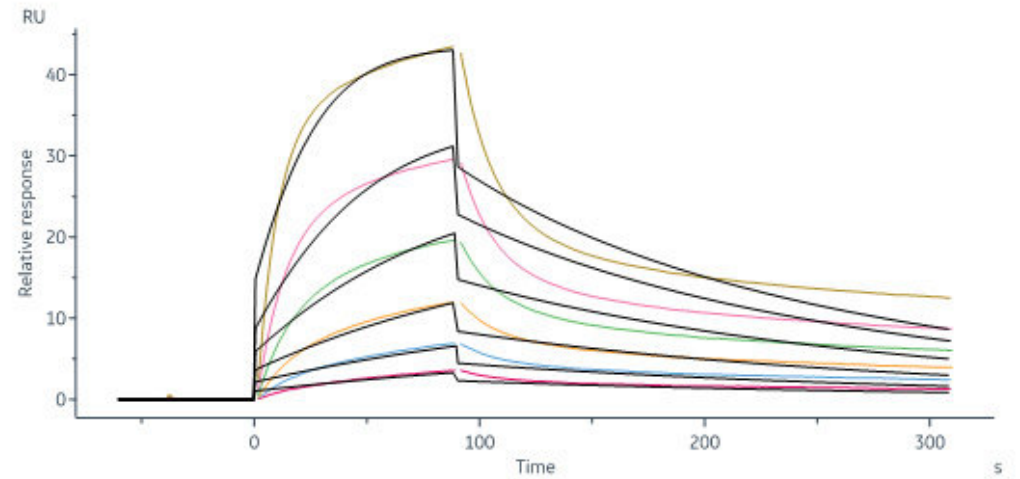


Immobilized Ipilimumab at 5 µg/mL (100 µL/well) can bind Biotinylated Mouse FCGRT&B2M Heterodimer Protein, His,Avitag (Cat. No. [FCM-M82W5](#)) with a linear range of 5-78 ng/mL (QC tested).

Bioactivity-SPR

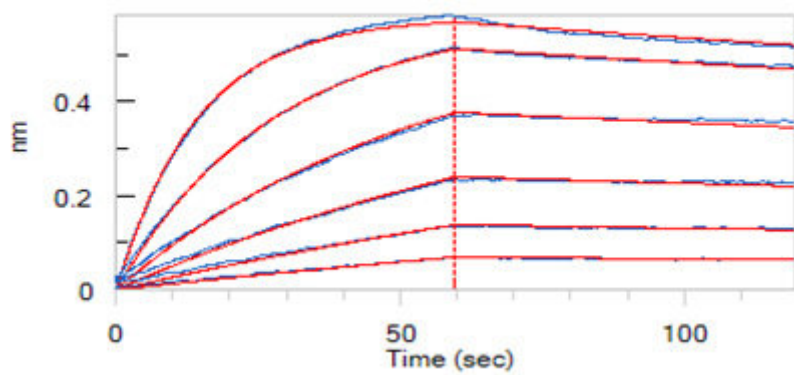


Biotinylated Mouse FCGRT&B2M Heterodimer Protein, His,Avitag (Cat. No. FCM-M82W5) captured on Biotin CAP-Series S Sensor Chip can bind Herceptin with an affinity constant of 3.42 nM as determined in a SPR assay (Biacore 8K) (Routinely tested).

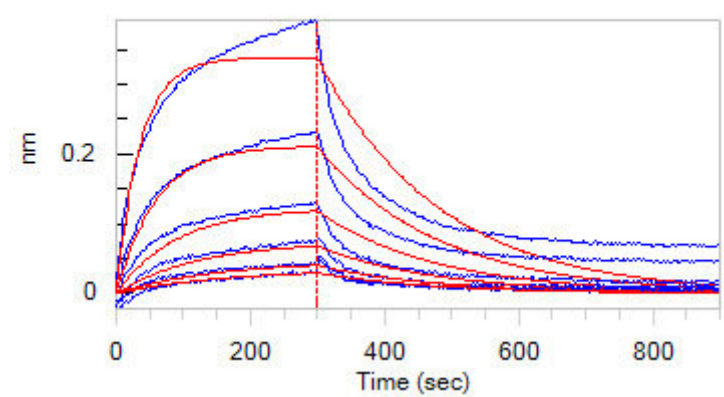


Biotinylated Mouse FCGRT&B2M Heterodimer Protein, His,Avitag (Cat. No. FCM-M82W5) captured on Biotin CAP-Series S Sensor Chip can bind Monoclonal Anti-Human CD3 Antibody, Mouse IgG2a (Clone: OKT3), Ultra-low endotoxin (Cat. No. CDE-M120a) with an affinity constant of 4.57 nM as determined in a SPR assay (Biacore 8K) (Routinely tested).

Bioactivity-BLI



Loaded Biotinylated Mouse FCGRT&B2M Heterodimer Protein, His,Avitag (Cat. No. FCM-M82W5) on SA Biosensor, can bind Herceptin with an affinity constant of 2.2 nM as determined in BLI assay (ForteBio Octet Red96e) (Routinely tested).



Loaded Biotinylated Mouse FCGRT&B2M Heterodimer Protein, His,Avitag (Cat. No. FCM-M82W5) on SA Biosensor, can bind Mouse Serum Albumin, His Tag (Cat. No. MSA-M52H8) with an affinity constant of 0.495 µM as determined in BLI assay (ForteBio Octet Red96e) (Routinely tested).

Background

FCGRT & B2M heterodimer protein (FcRn complex) consist of two subunits: p51 (equivalent to FCGRT), and p14 (equivalent to beta-2-microglobulin), and forms an MHC class I-like heterodimer. Fc fragment of IgG, receptor, transporter, alpha (FCGRT) binds to the Fc region of monomeric immunoglobulins gamma and mediates the uptake of IgG from milk. FCGRT possible role in transfer of immunoglobulin G from mother to fetus. Beta-2-microglobulin (B2M) is a component of the class I major histocompatibility complex (MHC) and involved in the presentation of peptide antigens to the immune system.

Clinical and Translational Updates

Please contact us via TechSupport@acrobiosystems.com if you have any question on this product.