

**Synonym**

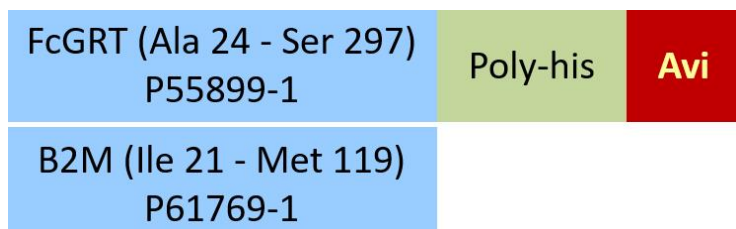
FcRn,FCGRT & B2M

**Source**

Biotinylated Human FCGRT&B2M Heterodimer Protein, His,Avitag (FCM-H82W7) is expressed from human 293 cells (HEK293). It contains AA Ala 24 - Ser 297 (FCGRT) & Ile 21 - Met 119 (B2M) (Accession # [P55899-1](#)(FCGRT) & [P61769-1](#)(B2M)).

Predicted N-terminus: Ala 24 (FCGRT) & Ile 21 (B2M)

**Molecular Characterization**



Biotinylated Human FCGRT&B2M Heterodimer Protein, His,Avitag, produced by co-expression of FCGRT and B2M, has a calculated MW of 34.2 kDa (FCGRT) and 11.7 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 38-40 kDa (FCGRT) and 12 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**

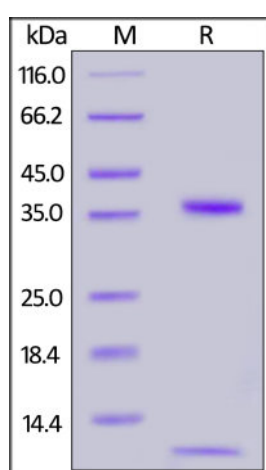
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

*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 12 months under sterile conditions after reconstitution.

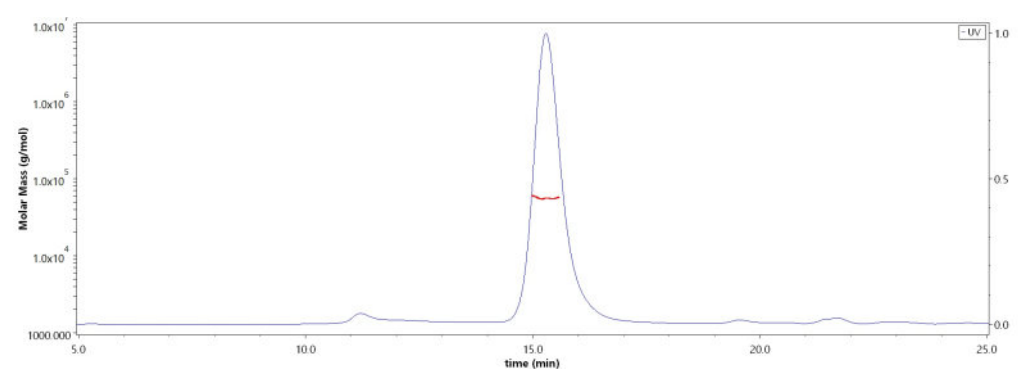
**SDS-PAGE**



Biotinylated Human 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%.

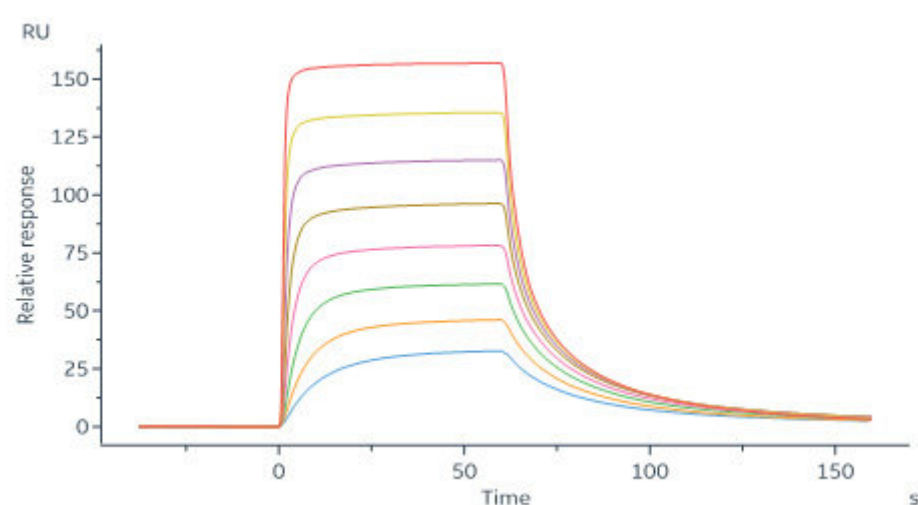
**Bioactivity-SPR**

**SEC-MALS**



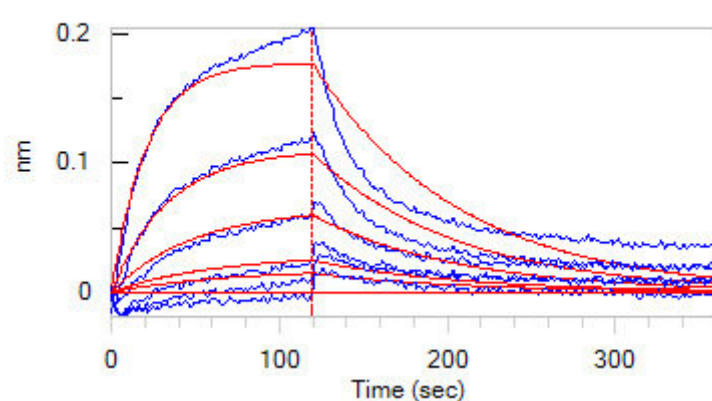
The purity of Biotinylated Human FCGRT&B2M Heterodimer Protein, His,Avitag (Cat. No. FCM-H82W7) is more than 90% and the molecular weight of this protein is around 50-60 kDa verified by SEC-MALS.

[Report](#)



Immobilized Biotinylated Human FCGRT&B2M Heterodimer Protein, His,Avitag (Cat. No. FCM-H82W7) on SA Chip can bind Herceptin® with an affinity constant of 0.267  $\mu\text{M}$  as determined in a SPR assay (Biacore 8K) (QC tested).

### Bioactivity-BLI



Loaded Biotinylated Human FCGRT&B2M Heterodimer Protein, His,Avitag (Cat. No. FCM-H82W7) on SA Biosensor, can bind Human Serum Albumin, His Tag (Cat. No. HSA-H5220) with an affinity constant of 0.647  $\mu\text{M}$  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](mailto:TechSupport@acrobiosystems.com) if you have any question on this product.