

Synonym

FcRn,FCGRT & B2M

Source

Human FCGRT&B2M Heterodimer Protein, His Tag&Strep II Tag (FCM-H5286) 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

FcGRT (Ala 24 - Ser 297) P55899-1	Poly-his
B2M (Ile 21 - Met 119) P61769-1	Strep II

Human FCGRT&B2M Heterodimer Protein, His Tag&Strep II Tag, produced by co-expression of FCGRT and B2M, has a calculated MW of 31.2 kDa (FCGRT) and 13.1 kDa (B2M). Subunit FCGRT is fused with a polyhistidine tag at the C-terminus and subunit Beta-2 microglobulin (B2M) is fused with Strep II-tag at the C-terminus. The reducing (R) protein migrates as 33 kDa (FCGRT) and 13 kDa (B2M) respectively due to glycosylation.

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.

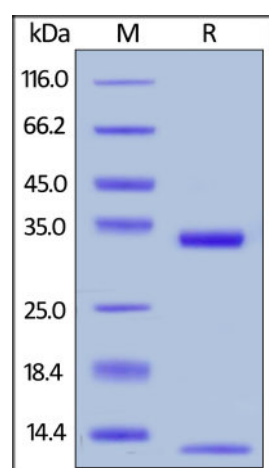
Storage

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

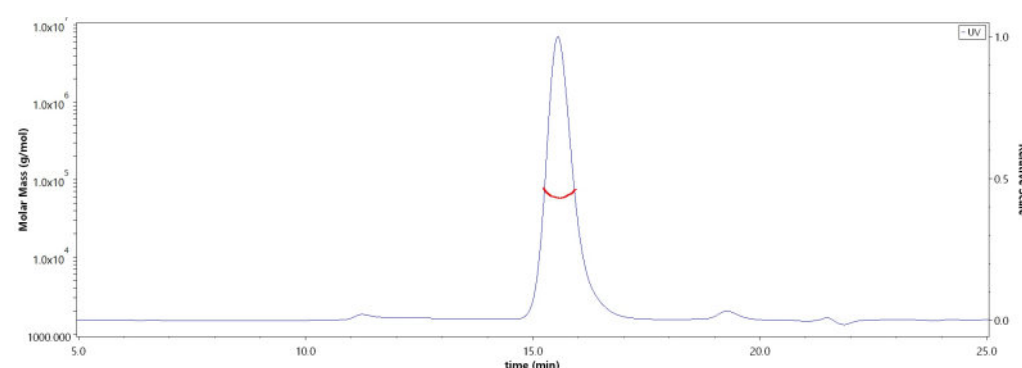
Please avoid repeated freeze-thaw cycles.

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

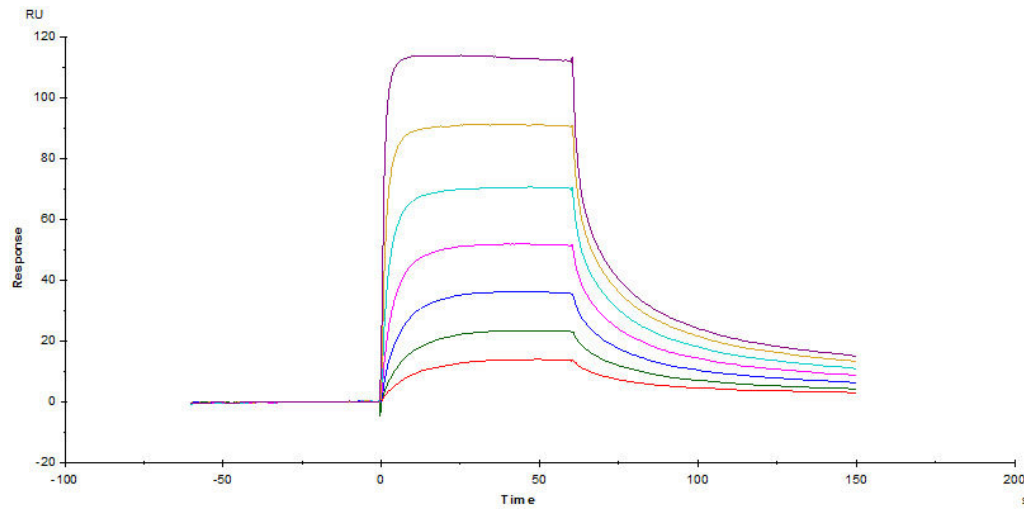
Human FCGRT&B2M Heterodimer Protein, His Tag&Strep II Tag on SDS-PAGE under reducing (R) condition. The gel was stained overnight with Coomassie Blue. The purity of the protein is greater than 95%.

SEC-MALS

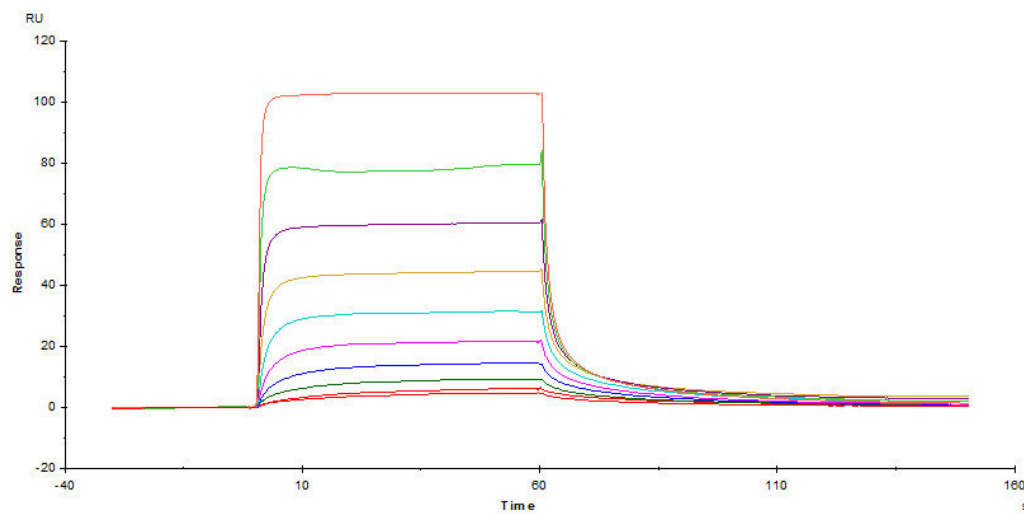
The purity of Human FCGRT&B2M Heterodimer Protein, His Tag&Strep II Tag (Cat. No. FCM-H5286) is more than 90% and the molecular weight of this protein is around 48-65 kDa verified by SEC-MALS.

[Report](#)

Bioactivity-SPR

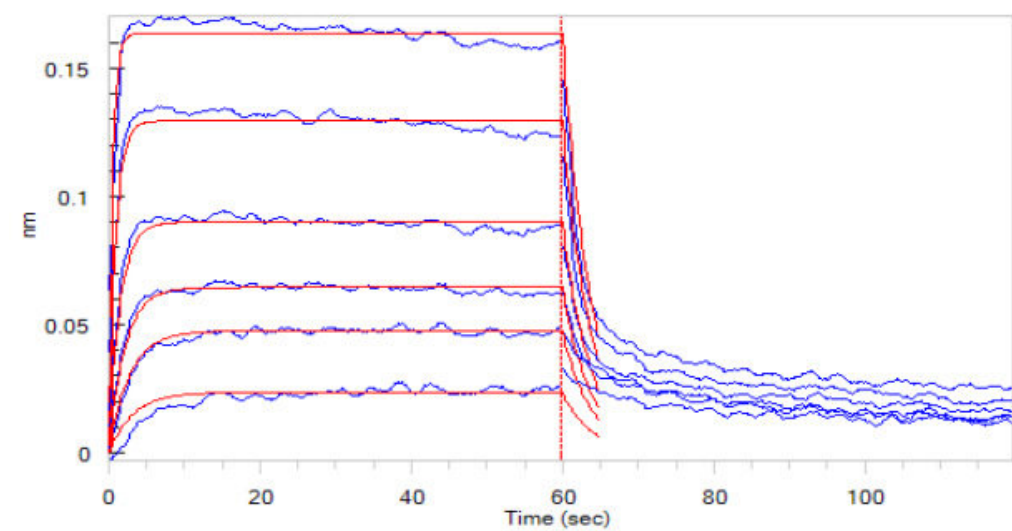


Immobilized Human FCGRT&B2M Heterodimer Protein, His Tag&Strep II Tag (Cat. No. FCM-H5286) on CM5 Chip via Anti-His antibody, can bind Herceptin with an affinity constant of 0.261 μM as determined in a SPR assay (Biacore T200) (QC tested).



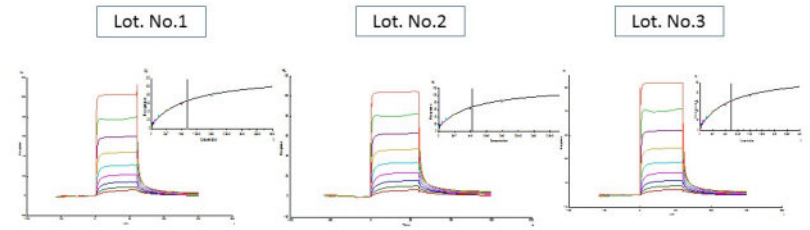
Immobilized Human FCGRT&B2M Heterodimer Protein, His Tag&Strep II Tag (Cat. No. FCM-H5286) on CM5 Chip, can bind Herceptin with an affinity constant of 1.19 μM as determined in a SPR assay (Biacore T200) (Routinely tested).

Bioactivity-BLI



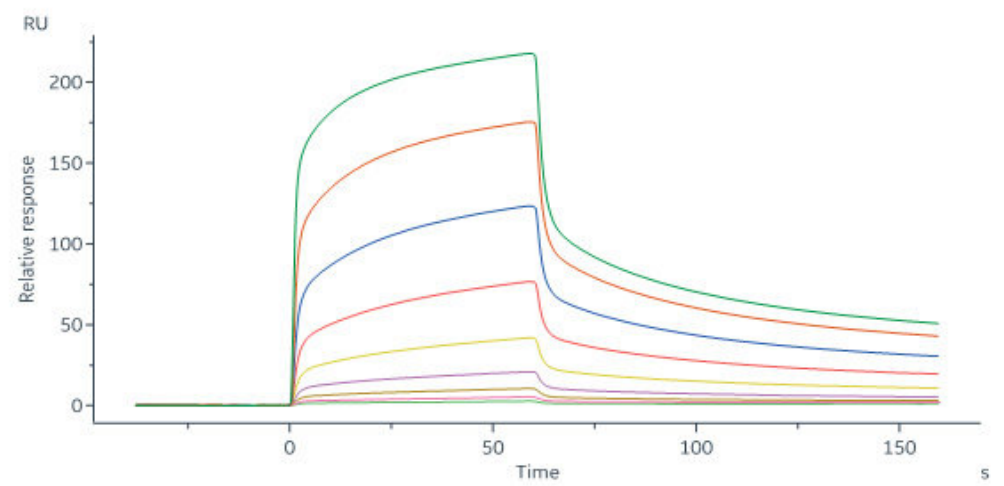
Loaded Human FCGRT&B2M Heterodimer Protein, His Tag&Strep II Tag (Cat. No. FCM-H5286) on SA Biosensor via Biotin his antibody, can bind Herceptin with an affinity constant of 0.27 μM as determined in BLI assay (ForteBio Octet Red96e) (Routinely tested).

Batch consistency

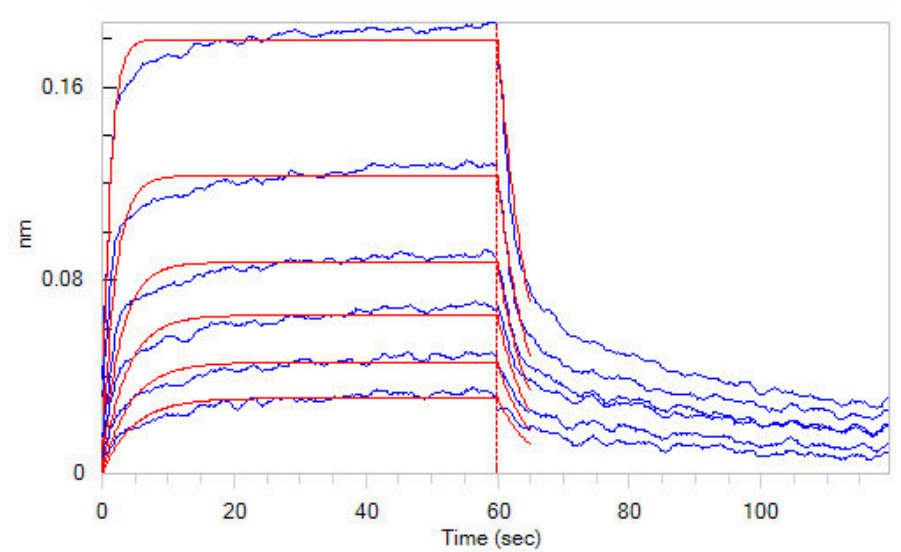


Ligand Name	Ligand Lot. No.	analyte	KD (M)
FcRn	Lot. No. 1	Herceptin	1.19E-06
	Lot. No. 2		1.06E-06
	Lot. No. 3		1.26E-06

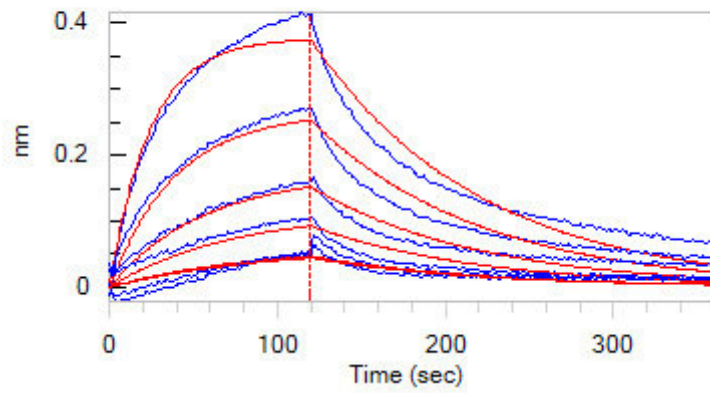
Report



Herceptin immobilized on CM4 Chip can bind Human FCGRT&B2M Heterodimer Protein, His Tag&Strep II Tag (Cat. No. FCM-H5286) with an affinity constant of 1.4 μM as determined in a SPR assay (Biacore 8K) (Routinely tested).



Loaded Human FCGRT&B2M Heterodimer Protein, His Tag&Strep II Tag (Cat. No. FCM-H5286) on AR2G Biosensor, can bind Herceptin with an affinity constant of 0.35 μM as determined in BLI assay (ForteBio Octet Red96e) (Routinely tested).



Loaded Biotinylated Human Serum Albumin, His,Avitag (Cat. No. HSA-H82E3) on SA Biosensor, can bind Human FCGRT&B2M Heterodimer Protein, His Tag&Strep II Tag (Cat. No. FCM-H5286) with an affinity constant of 0.641 μ 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 if you have any question on this product.