



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 / rFC method.

Purity

>95% as determined by SDS-PAGE.

>90% as determined by SEC-HPLC.

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

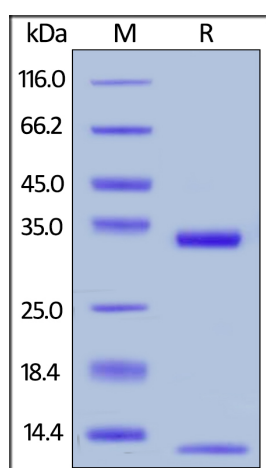
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

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 12 months under sterile conditions after reconstitution.

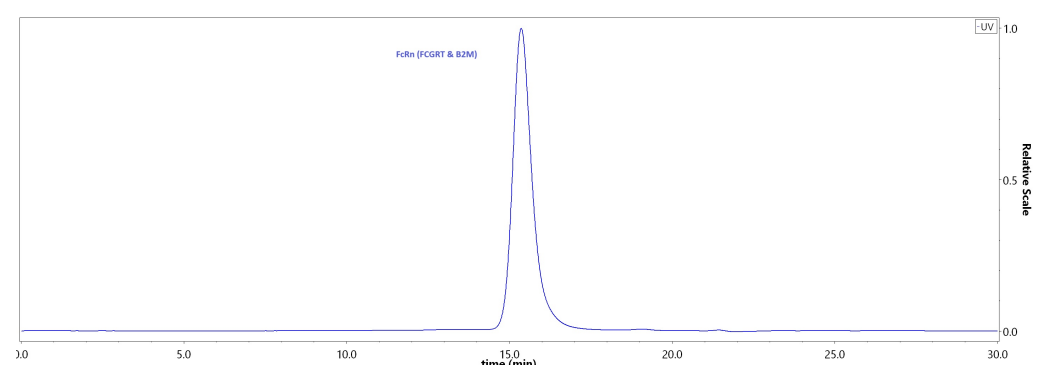
SDS-PAGE



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

Bioactivity-ELISA

SEC-HPLC



The purity of Human FCGRT&B2M Heterodimer Protein, His Tag&Strep II Tag (Cat. No. FCM-H5286) was greater than 90% as determined by SEC-HPLC.

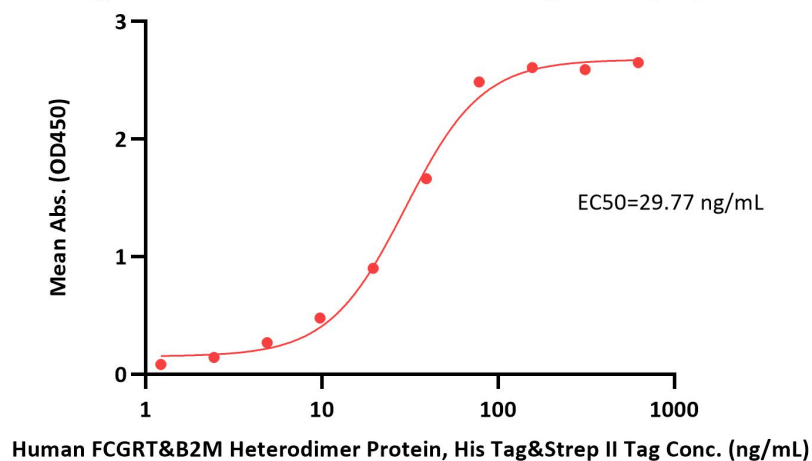
Discounts, Gifts,
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Human FCGRT&B2M Heterodimer Protein, His Tag&Strep II Tag ELISA

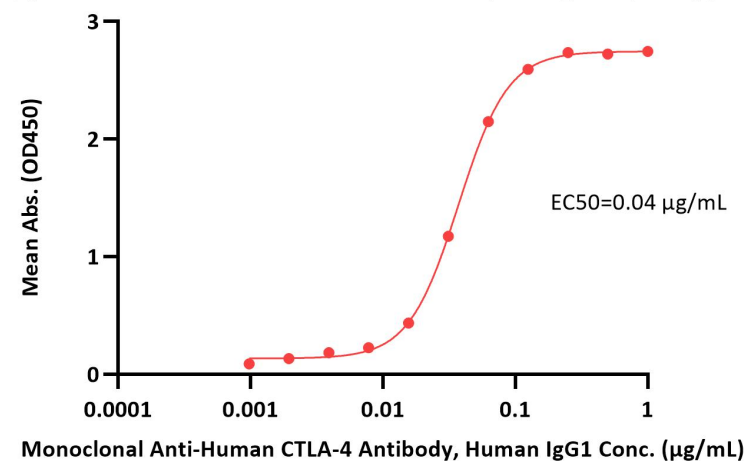
0.5 µg of Monoclonal Anti-Human CTLA-4 Antibody, Human IgG1 per well



Immobilized Monoclonal Anti-Human CTLA-4 Antibody, Human IgG1 at 5 µg/mL (100 µL/well) can bind Human FCGRT&B2M Heterodimer Protein, His Tag&Strep II Tag (Cat. No. FCM-H5286) with a linear range of 1-78 ng/mL (Routinely tested).

Human FCGRT&B2M Heterodimer Protein, His Tag&Strep II Tag ELISA

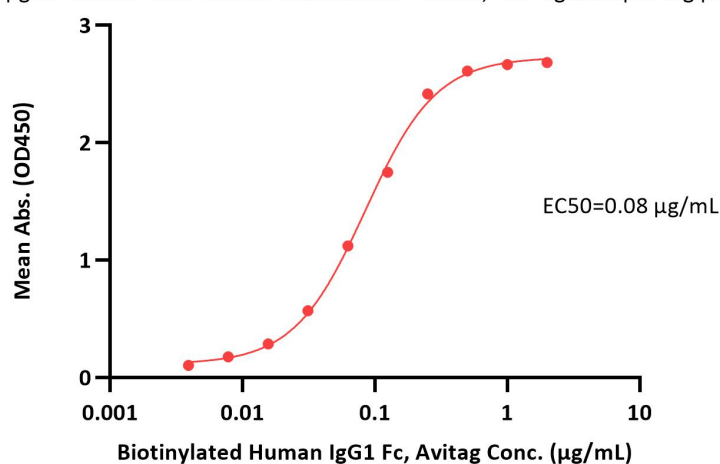
0.5 µg of Human FCGRT&B2M Heterodimer Protein, His Tag&Strep II Tag per well



Immobilized Human FCGRT&B2M Heterodimer Protein, His Tag&Strep II Tag (Cat. No. FCM-H5286) at 5 µg/mL (100 µL/well) on a Nickel Coated plate can bind Monoclonal Anti-Human CTLA-4 Antibody, Human IgG1 with a linear range of 0.001-0.063 µg/mL (Routinely tested).

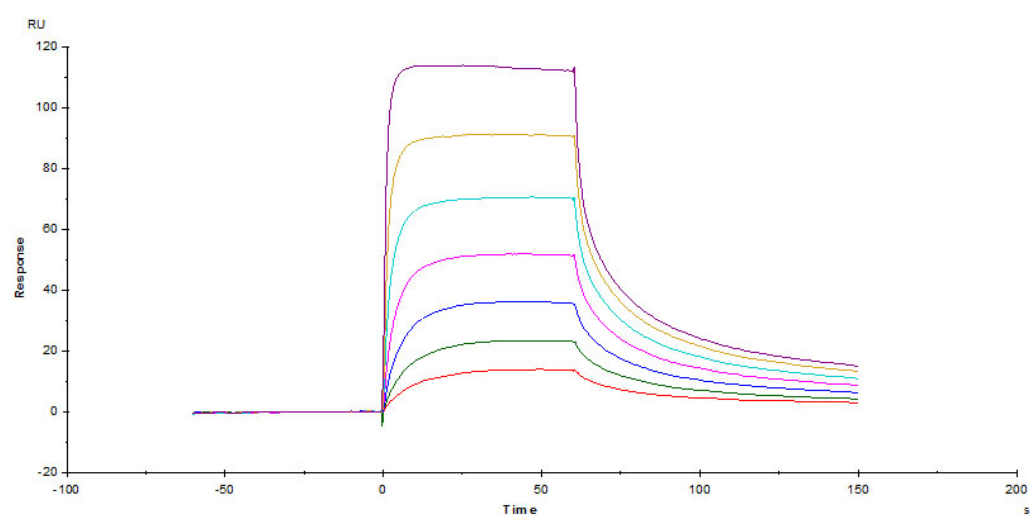
Human FCGRT&B2M Heterodimer Protein, His Tag&Strep II Tag ELISA

0.5 µg of Human FCGRT&B2M Heterodimer Protein, His Tag&Strep II Tag per well



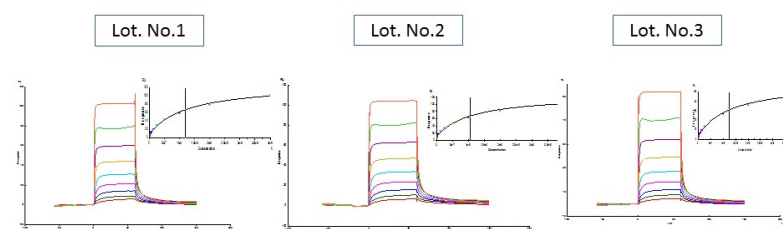
Immobilized Human FCGRT&B2M Heterodimer Protein, His Tag&Strep II Tag (Cat. No. FCM-H5286) at 5 µg/mL (100 µL/well) on a Nickel Coated plate can bind Biotinylated Human IgG1 Fc, Avitag (Cat. No. IG1-H8213) with a linear range of 0.004-0.25 µg/mL (Routinely tested).

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).

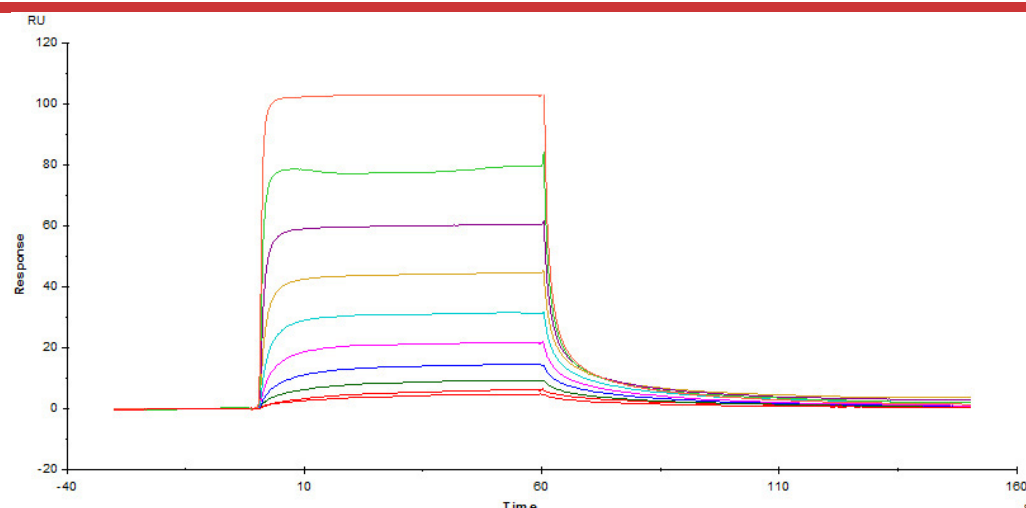
Batch consistency



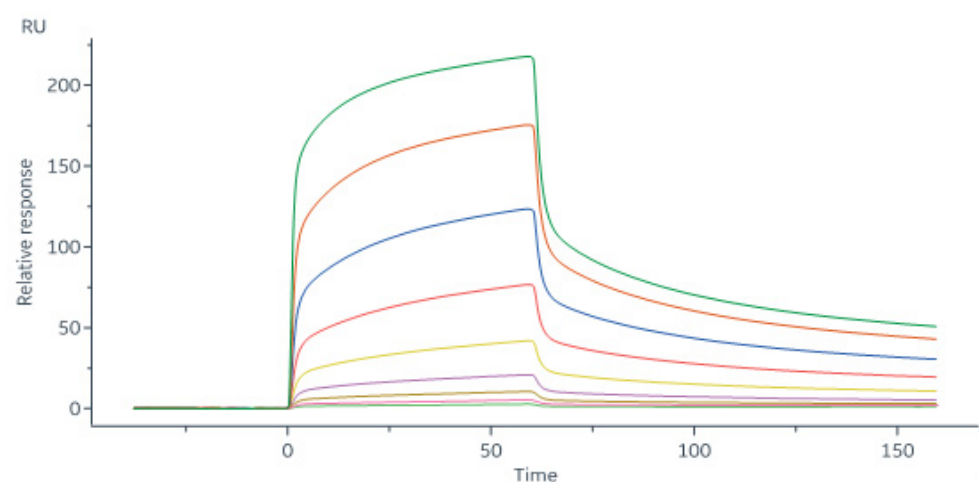
Ligand Name	Ligand Lot No.	analyte	KD (M)
FcRn	Lot. No. 1	Herceptin	1.19E-06
	Lot. No. 2		1.06E-06
	Lot. No. 3		1.26E-06

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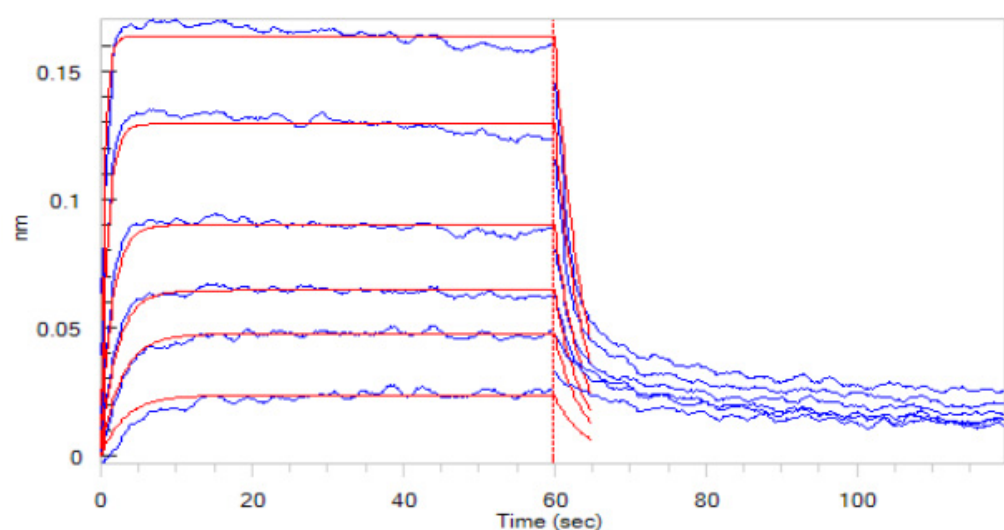


Immobilized Human FCGRT&B2M Heterodimer Protein, His Tag&Strep II Tag (Cat. No. FCM-H5286) on CM5 Chip, can bind Herceptin with an affinity constant of 1.19 μM as determined in a SPR assay (Biacore T200) (Routinely tested).

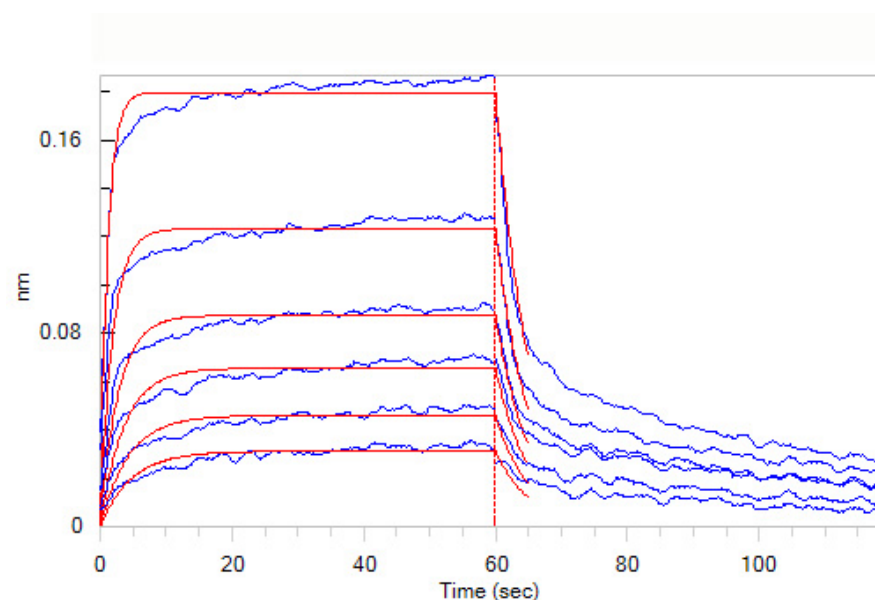


Herceptin immobilized on CM4 Chip can bind Human FCGRT&B2M Heterodimer Protein, His Tag&Strep II Tag (Cat. No. FCM-H5286) with an affinity constant of 1.4 μM as determined in a SPR assay (Biacore 8K) (Routinely tested).

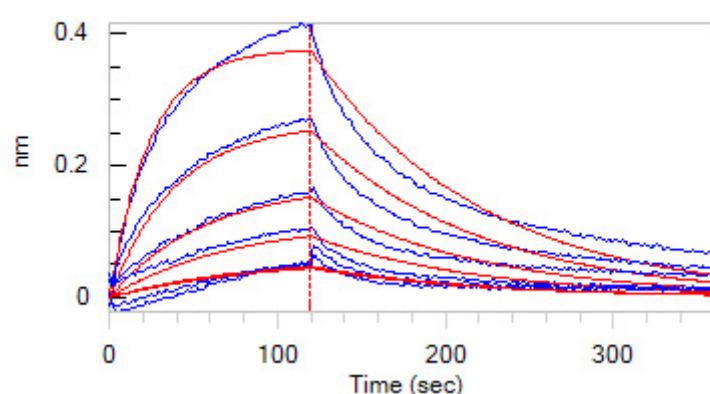
Bioactivity-BLI



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).



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 μM as determined in BLI assay (ForteBio Octet Red96e) (Routinely tested).

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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.

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