

Synonym

FcRn,FCGRT & B2M

Source

Rat FCGRT&B2M Heterodimer Protein, His Tag&Strep II Tag(FCM-R5287) is expressed from human 293 cells (HEK293). It contains AA Ala 23 - Ser 298 (FCGRT) & Ile 21 - Met 119 (B2M) (Accession # [P13599-1](#) (FCGRT) & [P07151-1](#) (B2M)).
Predicted N-terminus: Ala 23 (FCGRT) & Ile 21 (B2M)

Molecular Characterization

FcGRT (Ala 23 - Ser 298) P13599-1	Poly-his
B2M (Ile 21 - Met 119) P07151-1	Strep II

Rat FCGRT&B2M Heterodimer Protein, His Tag&Strep II Tag, produced by co-expression of FCGRT and B2M, has a calculated MW of 31.8 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 43-55 kDa (FCGRT) and 14 kDa (B2M) respectively due to different 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-MALS.

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

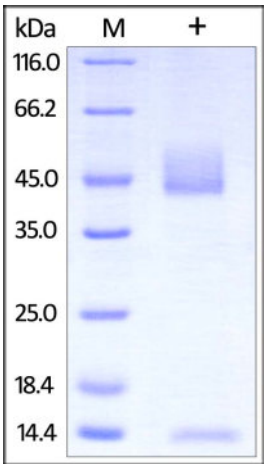
Please see Certificate of Analysis for specific instructions.
For best performance, we strongly recommend you to follow the reconstitution protocol provided in the CoA.

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:

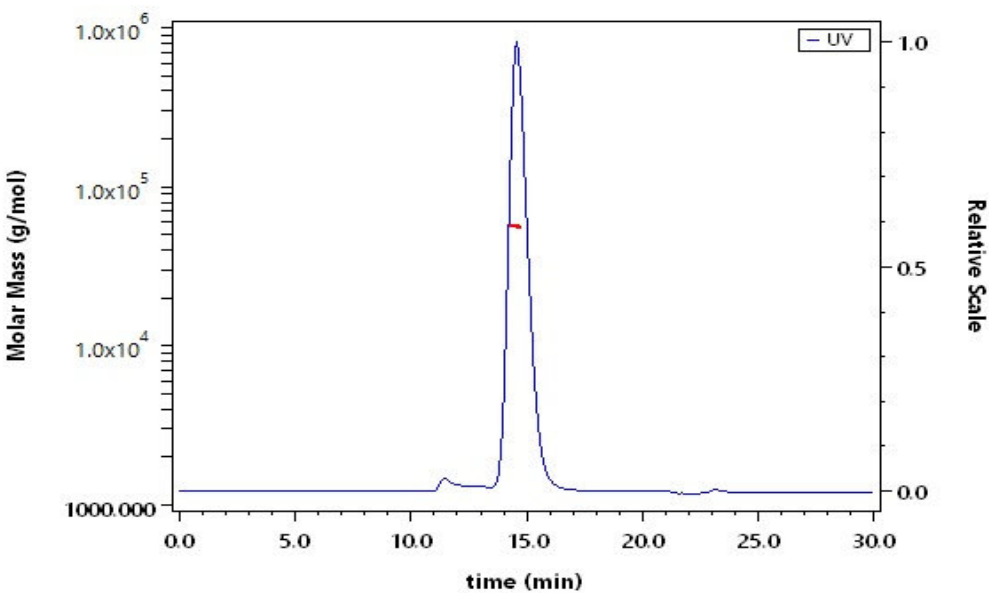
- 20°C to -70°C for 12 months in lyophilized state;
- 70°C for 12 months under sterile conditions after reconstitution.

SDS-PAGE



Rat 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%.

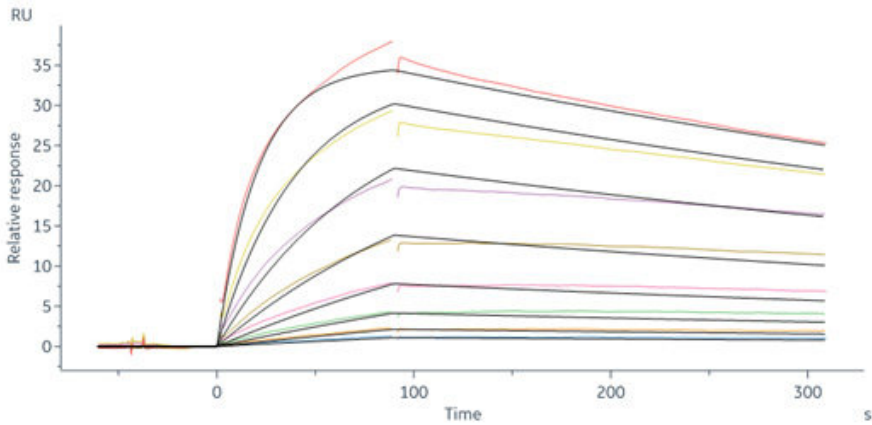
SEC-MALS



The purity of Rat FCGRT&B2M Heterodimer Protein, His Tag&Strep II Tag (Cat. No. FCM-R5287) is more than 90% and the molecular weight of this protein is around 55-65 kDa verified by SEC-MALS.
[Report](#)

Bioactivity-SPR





Rat FCGRT&B2M Heterodimer Protein, His Tag&Strep II Tag (Cat. No. FCM-R5287) captured on NTA-Series S sensor chip can bind Herceptin® with an affinity constant of 1.94 nM as determined in a SPR assay (Biacore 8K) (QC 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.

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