Biotinylated Human FcRn / FCGRT&B2M Heterodimer Protein, His Tag&Strep II Tag, ultra sensitivity (primary amine labeling) (HPLC & SPR verified)

Catalog # FCM-H8286

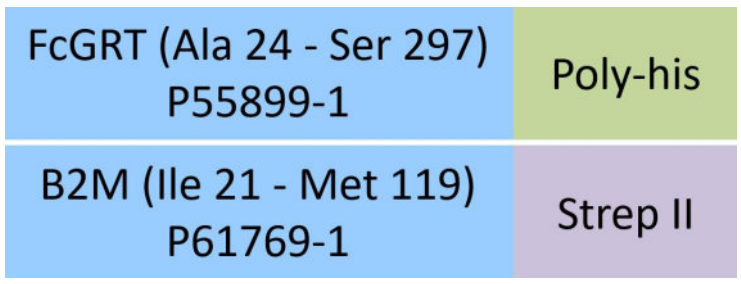
Synonym

FcRn, FCGRT & B2M

Source

Biotinylated Human FCGRT&B2M, His Tag&Strep II Tag, primary amine labeling (FCM-H8286) 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)). It is the biotinylated form of Human FCGRT&B2M Heterodimer Protein, His Tag&Strep II Tag (SPR & BLI verified) (FCM-H5286).
Predicted N-terminus: Ala 24(FCGRT) & Ile 21(B2M)

Molecular Characterization



Biotinylated Human FCGRT&B2M, His Tag&Strep II Tag, primary amine labeling, 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.

Labeling

The primary amines in the side chains of lysine residues and the N-terminus of the protein are conjugated with biotins using standard chemical labeling method. A standard biotin reagent (13.5 angstroms) is used in this product.

Protein Ratio

Passed as determined by the HABA assay / binding ELISA.

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

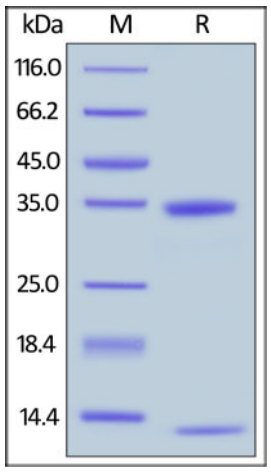
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

Please avoid repeated freeze-thaw cycles.

This product is stable after storage at:

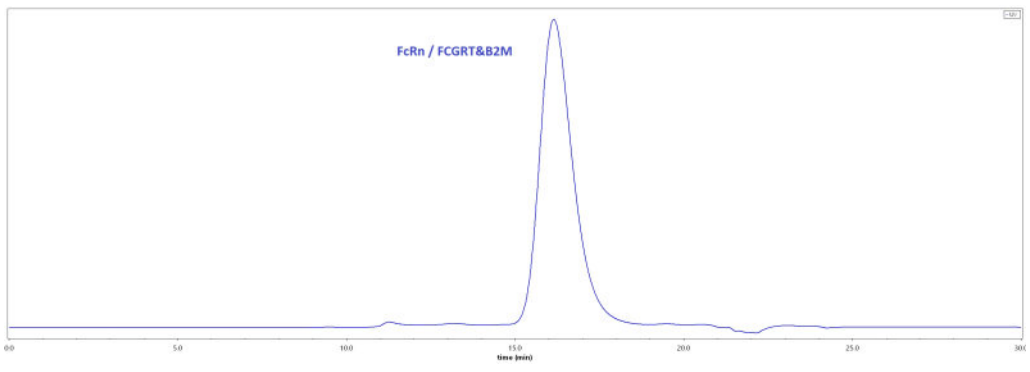
- -20°C to -70°C for 12 months in lyophilized state;
- -70°C for 12 months under sterile conditions after reconstitution.

SDS-PAGE



Biotinylated Human FCGRT&B2M, His Tag&Strep II Tag, primary amine labeling on SDS-PAGE under reducing (R) condition. The gel was stained with

SEC-HPLC

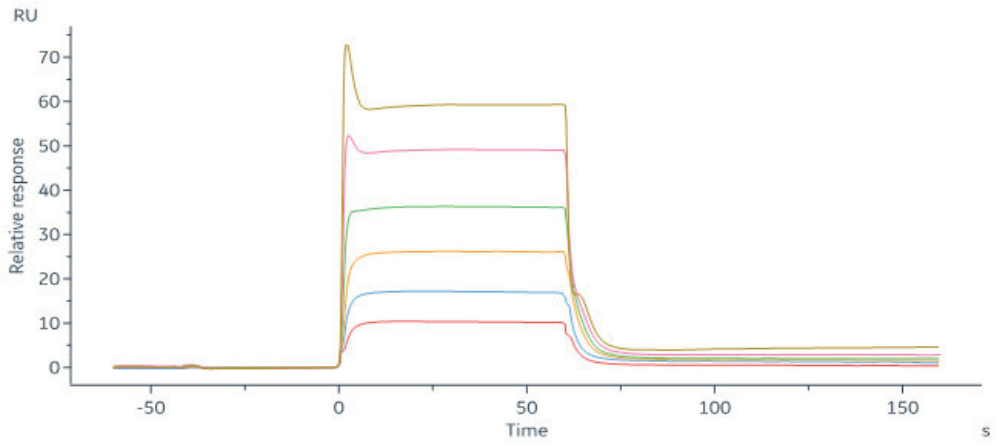


The purity of Biotinylated Human FCGRT&B2M, His Tag&Strep II Tag, primary amine labeling (Cat. No. FCM-H8286) was greater than 90% as

Coomassie Blue. The purity of the protein is greater than 95%.

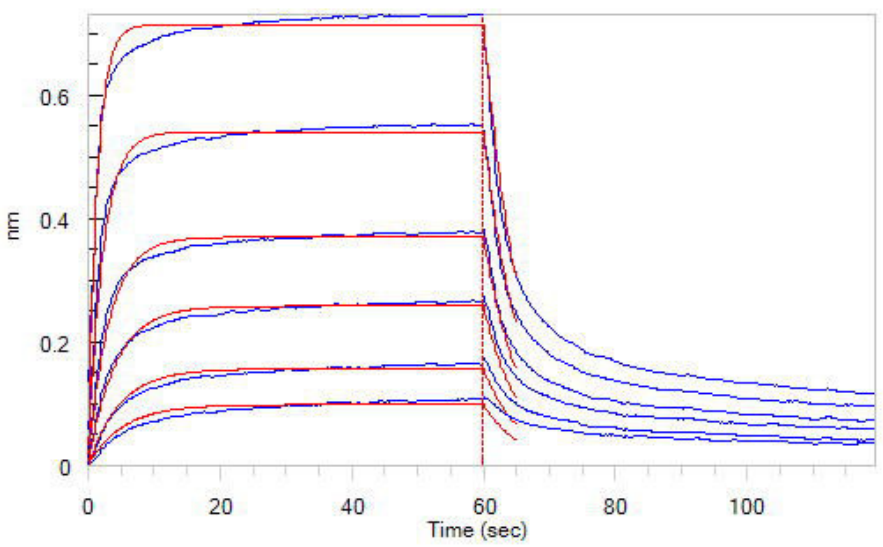
determined by SEC-HPLC.

Bioactivity-SPR

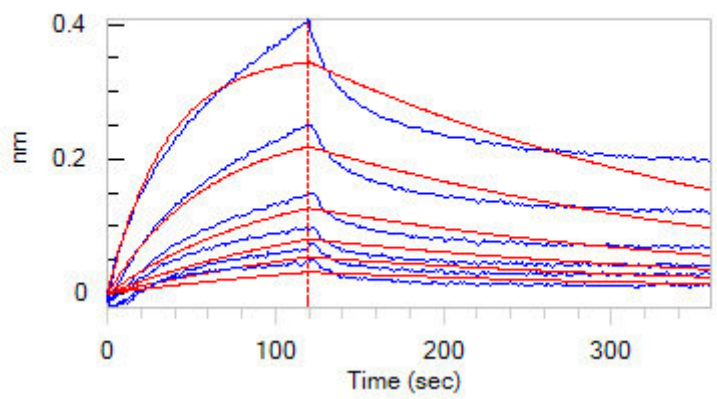


Biotinylated Human FCGRT&B2M, His Tag&Strep II Tag, primary amine labeling (Cat. No. FCM-H8286) captured on Biotin CAP - Series S sensor Chip can bind Herceptin® with an affinity constant of 0.57 μM as determined in a SPR assay (Biacore 8K) (QC tested).

Bioactivity-BLI



Loaded Biotinylated Human FCGRT&B2M, His Tag&Strep II Tag, primary amine labeling (Cat. No. FCM-H8286) on SA Biosensor, can bind Herceptin with an affinity constant of 0.36 μM as determined in BLI assay (ForteBio Octet Red96e) (Routinely tested).



Loaded Biotinylated Human FCGRT&B2M, His Tag&Strep II Tag, primary amine labeling (Cat. No. FCM-H8286) on SA Biosensor, can bind Human Serum Albumin, His Tag (Cat. No. HSA-H5220) with an affinity constant of 0.263 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.