Human FcRn / FCGRT&B2M Heterodimer Protein, Strep Tag&Tag Free (MALS & SPR verified)

Catalog # FCM-H5283

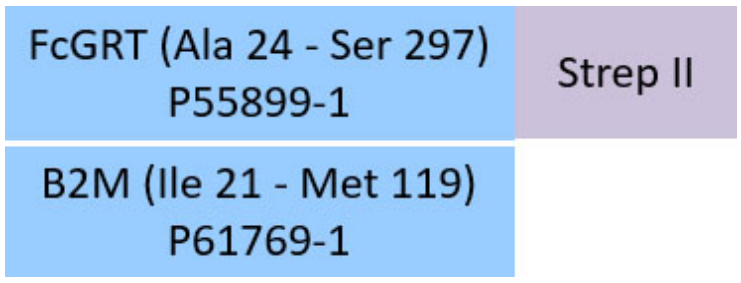
Synonym

FcRn,FCGRT & B2M

Source

Human FCGRT&B2M Heterodimer Protein, Strep Tag&Tag Free(FCM-H5283) 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



Human FCGRT&B2M Heterodimer Protein, Strep Tag&Tag Free, produced by co-expression of FCGRT and B2M, has a calculated MW of 33.8 kDa (FCGRT) and 11.7 kDa (B2M). Subunit FCGRT is fused with Strep II-tag at the C-terminus and subunit Beta-2 microglobulin (B2M) contains no tag. The reducing (R) protein migrates as 40-43 kDa (FCGRT) and 12 kDa (B2M) respectively due to glycosylation.

Endotoxin

Less than 1.0 EU per μg by the LAL method / rFC method.

Purity

>90% as determined by SDS-PAGE.

>95% 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

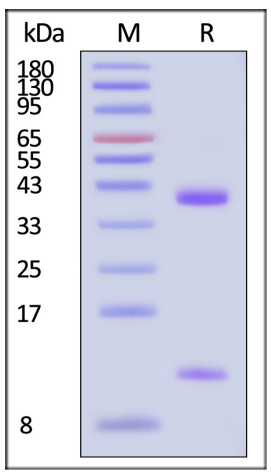
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

Please avoid repeated freeze-thaw cycles.

This product is stable after storage at:

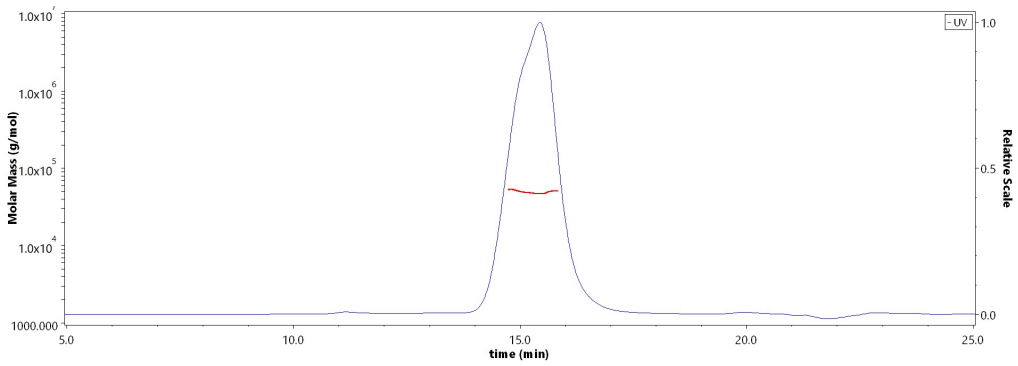
- -20°C to -70°C for 12 months in lyophilized state;
- -70°C for 3 months under sterile conditions after reconstitution.

SDS-PAGE



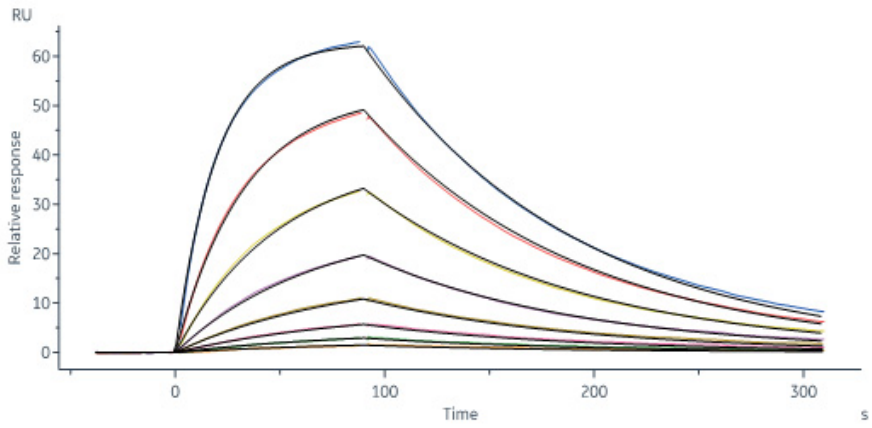
Human FCGRT&B2M Heterodimer Protein, Strep Tag&Tag Free on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 90% (With Star Ribbon Pre-stained Protein Marker).

SEC-MALS

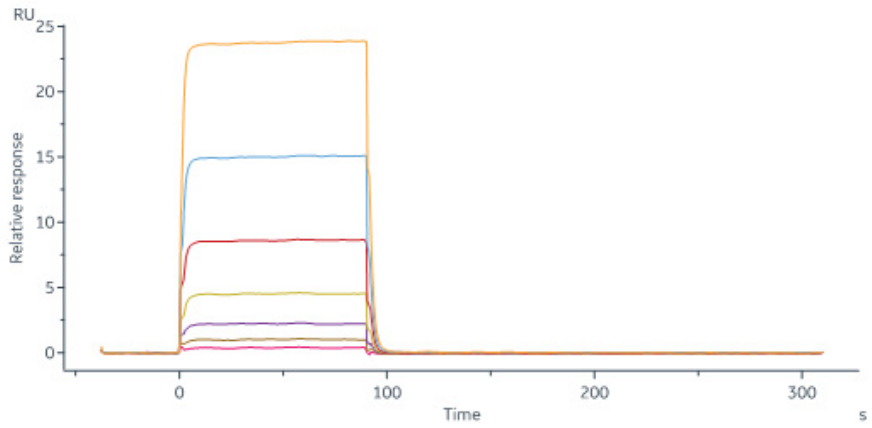


The purity of Human FCGRT&B2M Heterodimer Protein, Strep Tag&Tag Free (Cat. No. FCM-H5283) is more than 95% and the molecular weight of this protein is around 45-60 kDa verified by SEC-MALS.
Report

Bioactivity-SPR



Human IgG1 Fc (C103S, M135Y, S137T, T139E, H316K, N317F), His Tag (Cat. No. IG1-H52H8) immobilized on CM4 Chip can bind Human FCGRT&B2M Heterodimer Protein, Strep Tag&Tag Free (Cat. No. FCM-H5283) with an affinity constant of 23.8 nM as determined in a SPR assay (Biacore 8K) (QC tested).



Herceptin immobilized on CM4 Chip can bind Human FCGRT&B2M Heterodimer Protein, Strep Tag&Tag Free (Cat. No. FCM-H5283) with an affinity constant of 2.67 μM as determined in a SPR assay (Biacore 8K) (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.