

Synonym

FcRn,FCGRT & B2M

Source

Mouse FCGRT&B2M Heterodimer Protein, His Tag(FCM-M52W8) is expressed from human 293 cells (HEK293). It contains AA Ser 22 - Ser 297 (FCGRT) & Ile 21 - Met 119 (B2M) (Accession # [Q61559-1](#) (FCGRT) & [P01887-1](#) (B2M)).

Predicted N-terminus: Ser 22 (FCGRT) & Ile 21 (B2M)

Molecular Characterization

FcGRT (Ser 22 - Ser 297) Q61559-1	Poly-his
B2M (Ile 21 - Met 119) P01887-1	

Mouse FCGRT&B2M Heterodimer Protein, His Tag, produced by co-expression of FCGRT and B2M, has a calculated MW of 32.9 kDa (FCGRT) and 11.6 kDa (B2M). Subunit FCGRT is fused with a polyhistidine tag at the C-terminus and subunit Beta-2 microglobulin (B2M) contains no tag at the C-terminus. The reducing (R) protein migrates as 45-50 kDa (FCGRT) and 10 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.

>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

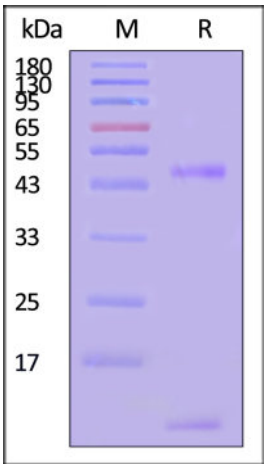
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

*Please avoid repeated freeze-thaw cycles.*

This product is stable after storage at:

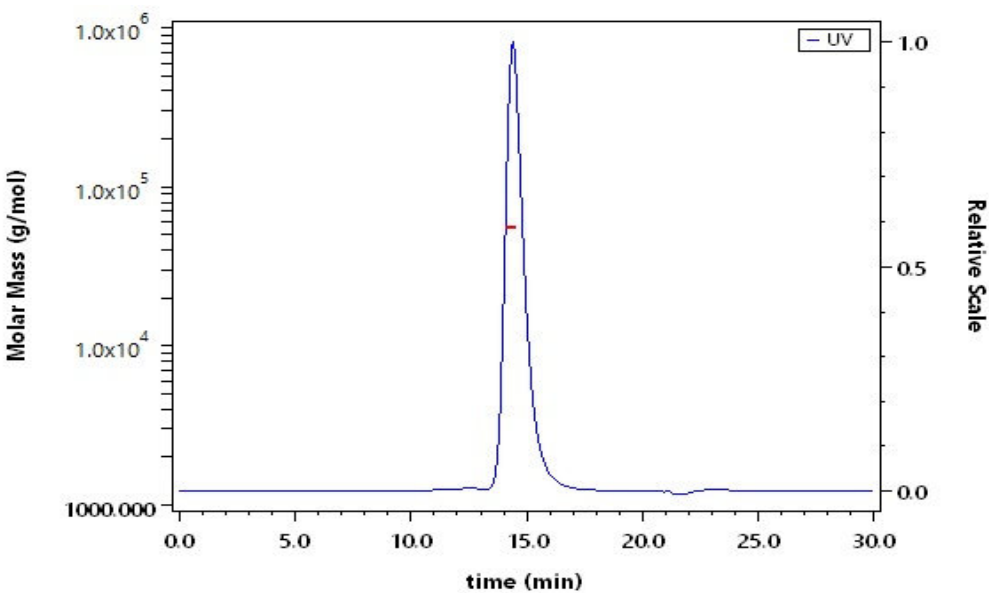
- 20°C to -70°C for 12 months in lyophilized state;
- 70°C for 12 months under sterile conditions after reconstitution.

SDS-PAGE



Mouse FCGRT&B2M Heterodimer Protein, His Tag on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 95% (With [Star Ribbon Pre-stained Protein Marker](#)).

SEC-MALS

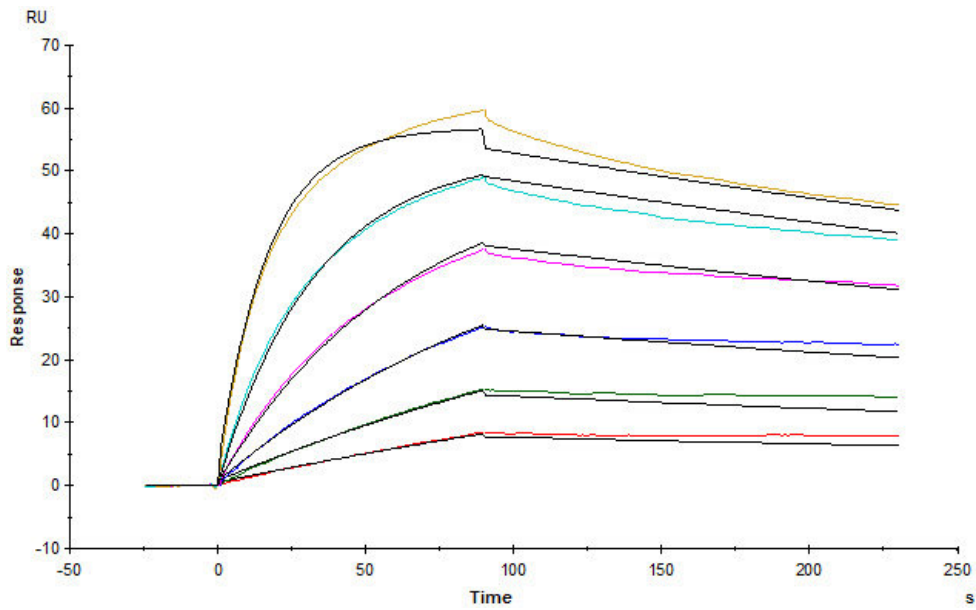


The purity of Mouse FCGRT&B2M Heterodimer Protein, His Tag (Cat. No. FCM-M52W8) is more than 95% and the molecular weight of this protein is around 45-60 kDa verified by SEC-MALS.

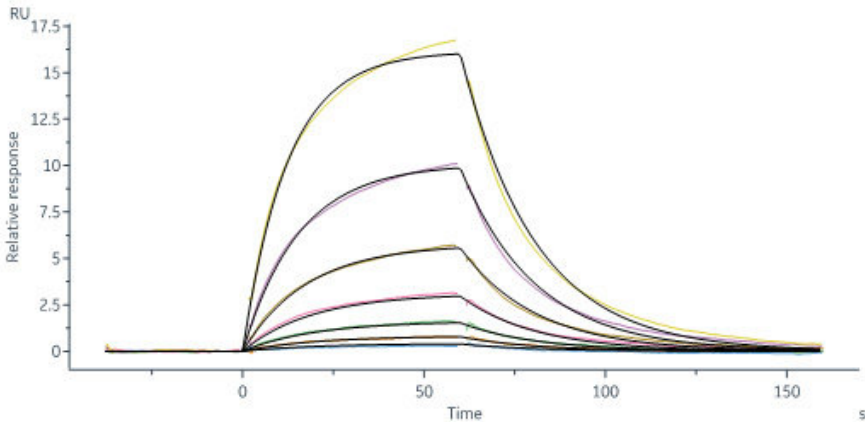
[Report](#)

Bioactivity-SPR

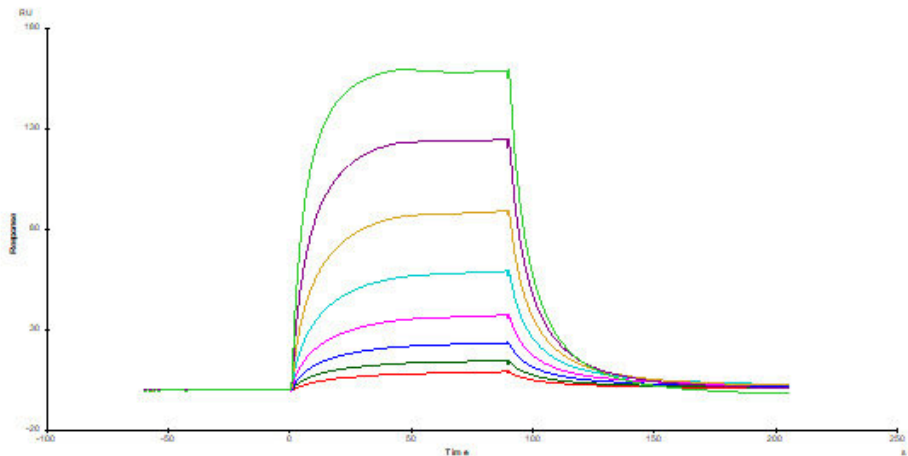




Mouse FCGRT&B2M Heterodimer Protein, His Tag (Cat. No. FCM-M52W8) captured on NTA-Series S sensor chip can bind Herceptin with an affinity constant of 2.52 nM as determined in a SPR assay (Biacore T200) (Routinely tested).

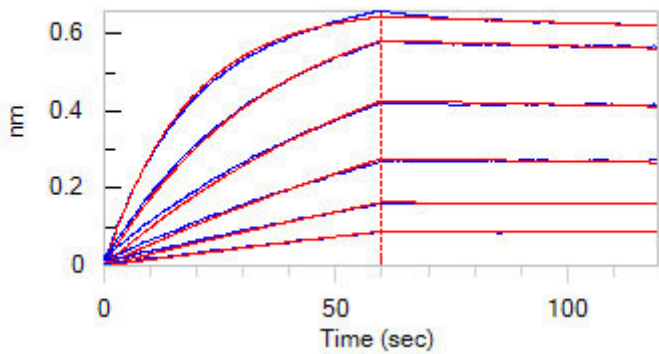


Biotinylated Mouse Serum Albumin, His,Avitag (Cat. No. MSA-M82E4) immobilized on SA Chip can bind Mouse FCGRT&B2M Heterodimer Protein, His Tag (Cat. No. FCM-M52W8) with an affinity constant of 377 nM as determined in a SPR assay (Biacore 8K) (Routinely tested).

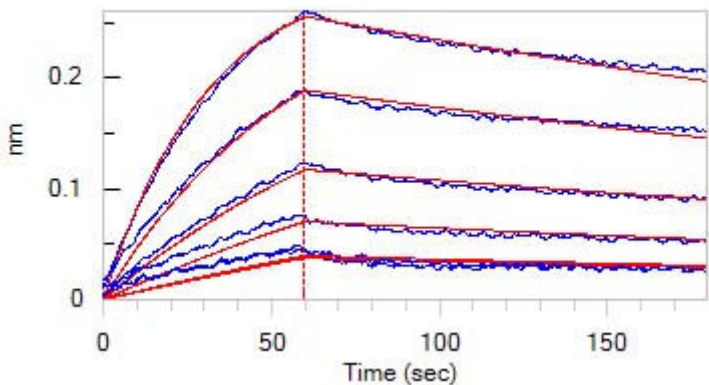


Mouse Serum Albumin, His Tag (Cat. No. MSA-M52H8) immobilized on CM5 Chip can bind Mouse FCGRT&B2M Heterodimer Protein, His Tag (Cat. No. FCM-M52W8) with an affinity constant of 0.376  $\mu$ M as determined in a SPR assay (Biacore T200) (Routinely tested).

Bioactivity-BLI



Loaded Mouse FCGRT&B2M Heterodimer Protein, His Tag (Cat. No. FCM-M52W8) on NTA Biosensor, can bind Herceptin with an affinity constant of 1.13 nM as determined in BLI assay (ForteBio Octet Red96e) (QC tested).



Loaded Mouse FCGRT&B2M Heterodimer Protein, His Tag (Cat. No. FCM-M52W8) on NTA Biosensor, can bind Mouse IgG Fc, Tag Free (Cat. No. IG1-M5208) with an affinity constant of 14.5 nM 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.

