

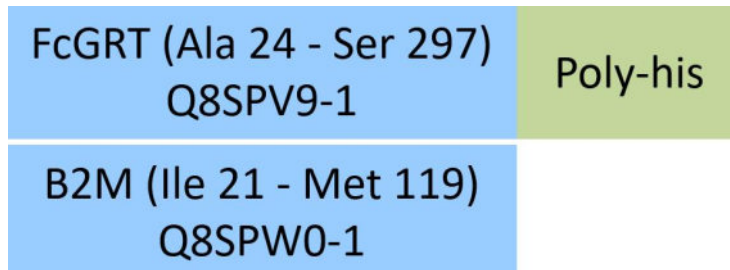
Synonym

FcRn,FCGRT & B2M

Source

Cynomolgus / Rhesus macaque FCGRT&B2M Heterodimer Protein, His Tag, is expressed from human 293 cells (HEK293). It contains AA Ala 24 - Ser 297 (FCGRT) & Ile 21 - Met 119 (B2M) (Accession # [Q8SPV9-1](#)(FCGRT) & [Q8SPW0-1](#)(B2M)). In the region Ala 24 - Ser 297 (FCGRT) & Ile 21 - Met 119 (B2M), the AA sequence of Cynomolgus and Rhesus macaque FCGRT&B2M are homologous.

Predicted N-terminus: Ala 24 (FCGRT) & Ile 21 (B2M)

Molecular Characterization

Cynomolgus / Rhesus macaque FCGRT&B2M Heterodimer Protein, His Tag, produced by co-expression of FCGRT and B2M, has a calculated MW of 34.1 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 34 kDa (FCGRT) and 12 kDa (B2M) respectively due to glycosylation.

Endotoxin

Less than 1.0 EU per µg by the LAL 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. Normally trehalose is added as protectant before lyophilization.

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.

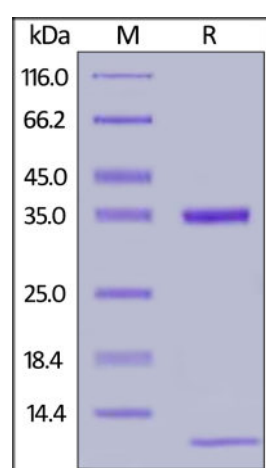
Storage

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

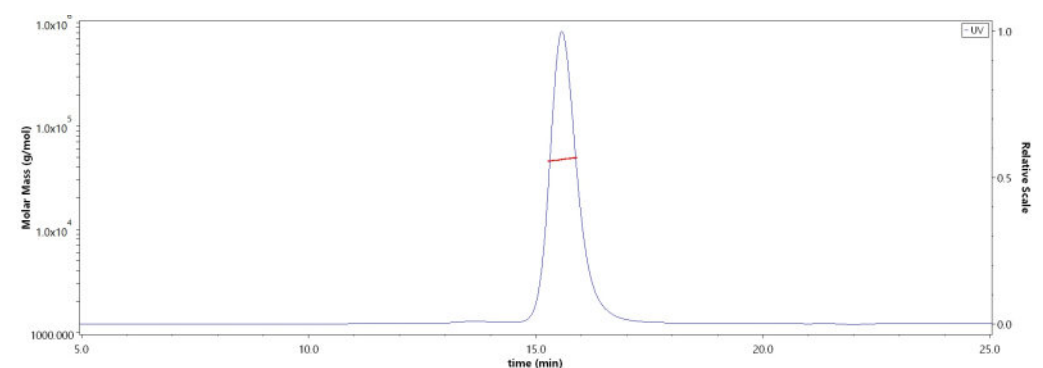
Please avoid repeated freeze-thaw cycles.

This product is stable after storage at:

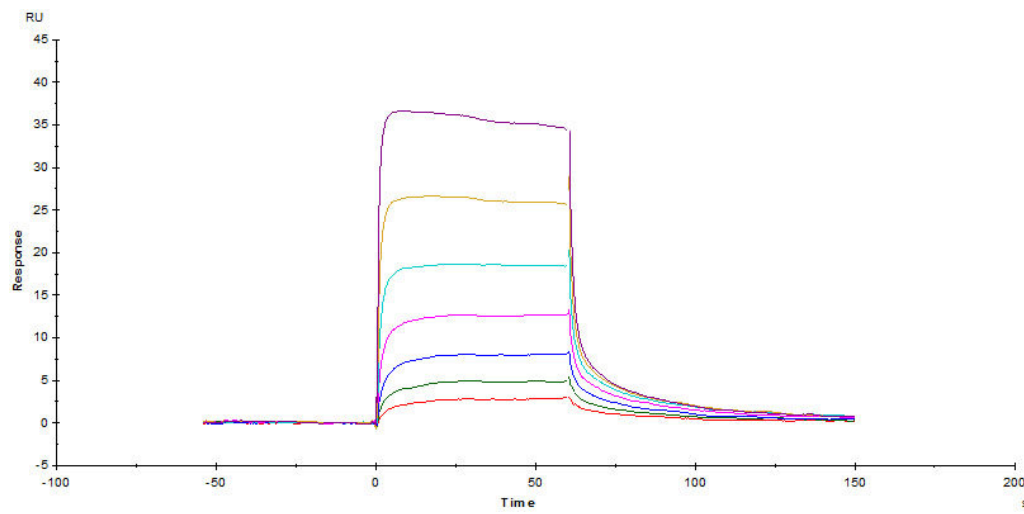
- -20°C to -70°C for 12 months in lyophilized state;
- -70°C for 12 months under sterile conditions after reconstitution.

SDS-PAGE

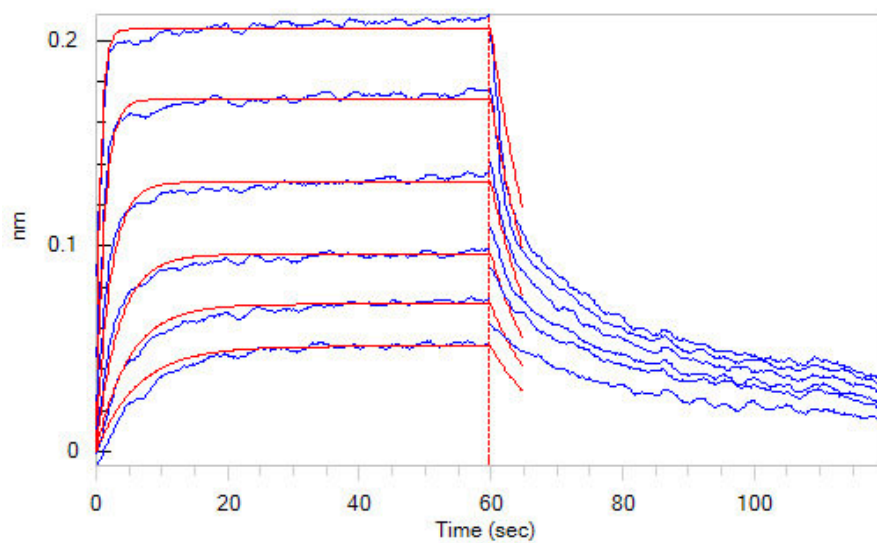
Cynomolgus / Rhesus macaque FCGRT&B2M Heterodimer Protein, His Tag on SDS-PAGE under reducing (R) condition. The gel was stained overnight with Coomassie Blue. The purity of the protein is greater than 95%.

SEC-MALS

The purity of Cynomolgus / Rhesus macaque FCGRT&B2M Heterodimer Protein, His Tag (Cat. No. FCM-C52W9) was more than 90% and the molecular weight of this protein is around 38-56 kDa verified by SEC-MALS.

Bioactivity-SPR

Captured Cynomolgus / Rhesus macaque FCGRT&B2M Heterodimer Protein, His Tag (Cat. No. FCM-C52W9) on CM5 Chip via Anti-His antibody can bind Herceptin® with an affinity constant of 1.14 μM as determined in SPR assay (Biacore T200) (Routinely tested).

Bioactivity-BLI

Loaded Cynomolgus / Rhesus macaque FCGRT&B2M Heterodimer Protein, His Tag (Cat. No. FCM-C52W9) on SA Biosensor via Biotin his antibody, can bind Herceptin with an affinity constant of 0.16 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.

Clinical and Translational Updates

Please contact us via TechSupport@acrobiosystems.com if you have any question on this product.