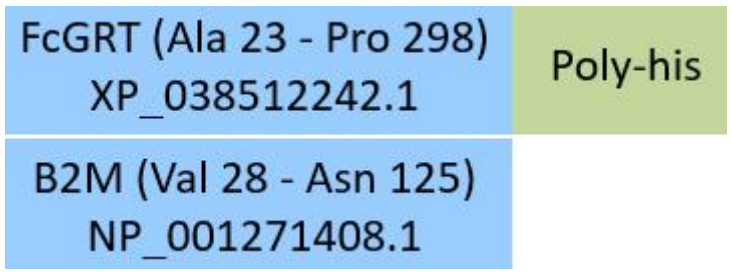
Synonym

FcRn,FCGRT & B2M

Source

Canine FCGRT&B2M Heterodimer Protein, His Tag&Tag Free(FCM-C52W8) is expressed from human 293 cells (HEK293). It contains AA Ala 23 - Pro 298 (FCGRT) & Val 28 - Asn 125 (B2M) (Accession # XP_038512242.1 (FCGRT) & NP_001271408.1 (B2M)).
Predicted N-terminus: Ala 23 (FCGRT) & Val 28 (B2M)

Molecular Characterization



Canine FCGRT&B2M Heterodimer Protein, His Tag&Tag Free, produced by co-expression of FCGRT and B2M, has a calculated MW of 32.3 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 35-37 kDa (FCGRT) and 13 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 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

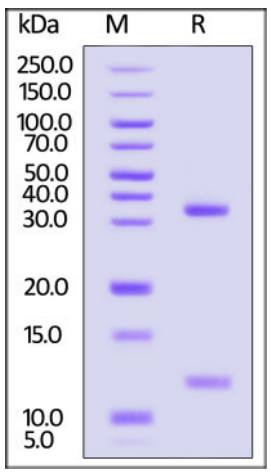
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

Please avoid repeated freeze-thaw cycles.

This product is stable after storage at:

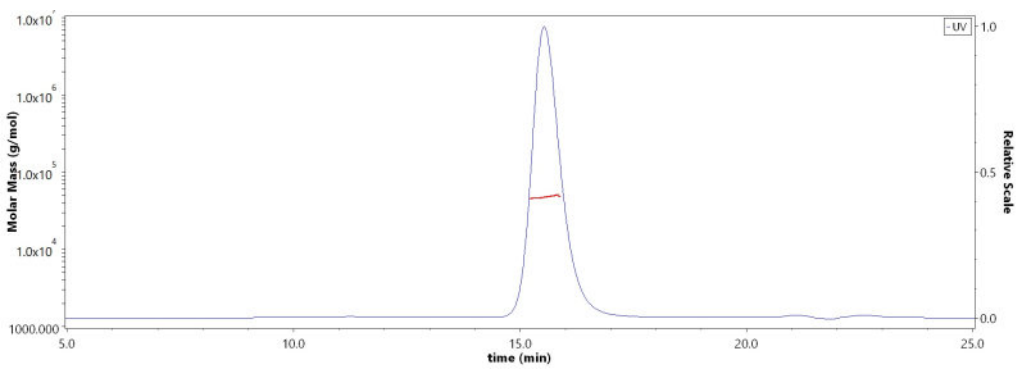
- -20°C to -70°C for 12 months in lyophilized state;
- -70°C for 3 months under sterile conditions after reconstitution.

SDS-PAGE



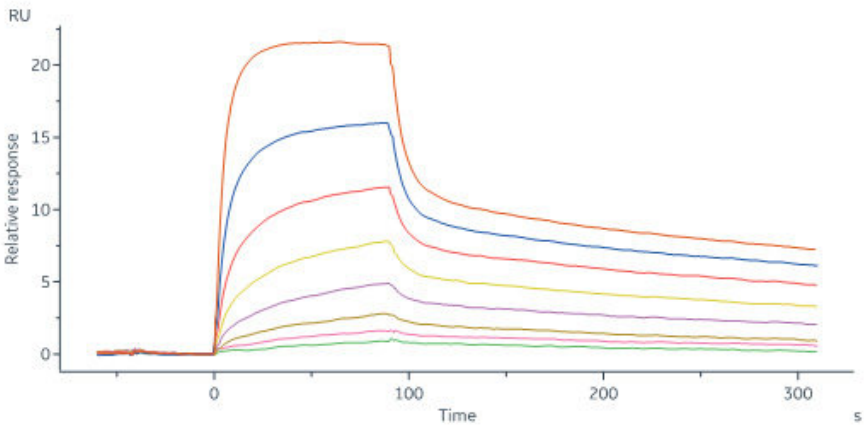
Canine FCGRT&B2M Heterodimer Protein, His Tag&Tag Free on SDS-PAGE under reducing (R) condition. The gel was stained overnight with Coomassie Blue. The purity of the protein is greater than 95%.

SEC-MALS

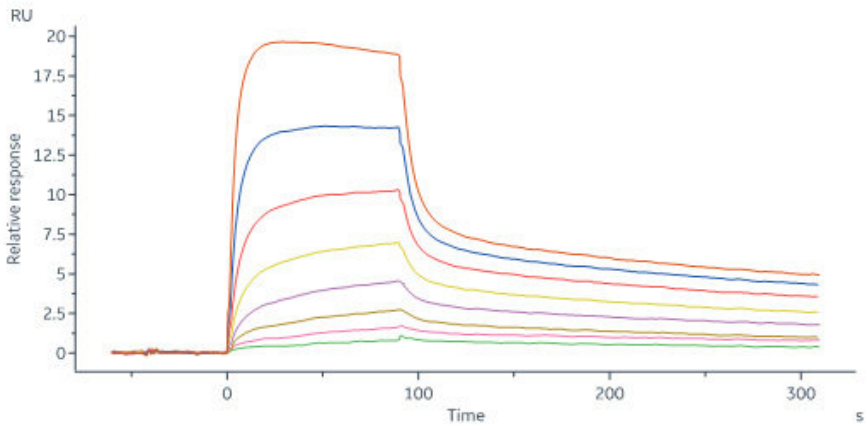


The purity of Canine FCGRT&B2M Heterodimer Protein, His Tag&Tag Free (Cat. No. FCM-C52W8) is more than 90% and the molecular weight of this protein is around 43-60 kDa verified by SEC-MALS.
Report

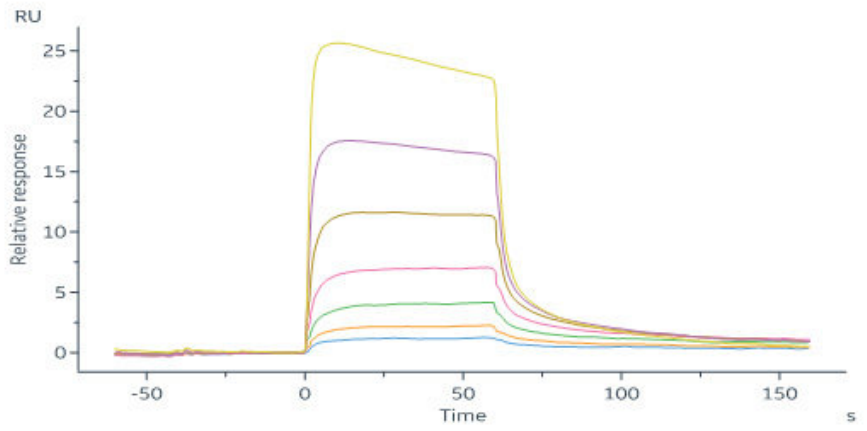
Bioactivity-SPR



Canine FCGRT&B2M Heterodimer Protein, His Tag&Tag Free (Cat. No. FCM-C52W8) captured on CM5 chip via anti-His antibody can bind Herceptin with an affinity constant of 0.171 μM as determined in a SPR assay (Biacore 8K) (Routinely tested).



Canine FCGRT&B2M Heterodimer Protein, His Tag&Tag Free (Cat. No. FCM-C52W8) captured on CM5 chip via anti-His antibody can bind Ipilimumab with an affinity constant of 0.132 μM as determined in a SPR assay (Biacore 8K) (QC tested).



Canine FCGRT&B2M Heterodimer Protein, His Tag&Tag Free (Cat. No. FCM-C52W8) captured on CM5 chip via anti-His antibody can bind Monoclonal Anti-Human CD3 Antibody, Mouse IgG2a (Clone: OKT3) with an affinity constant of 1.11 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.

Clinical and Translational Updates

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