Biotinylated Canine FcRn / FCGRT&B2M Heterodimer Protein, His,Avitag™&Tag Free (MALS & SPR verified)

Catalog # FCM-C82W9

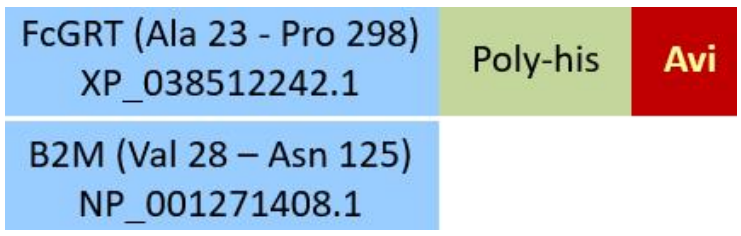
Synonym

FcRn,FCGRT & B2M

Source

Biotinylated Canine FCGRT&B2M Heterodimer Protein, His,Avitag&Tag Free(FCM-C82W9) is expressed from human 293 cells (HEK293). It contains AA Ala 23 - Pro 298 & Val 28 - Asn 125 (Accession # XP_038512242.1 & NP_001271408.1).
Predicted N-terminus: Ala 23 | Val 28

Molecular Characterization



Biotinylated Canine FCGRT&B2M Heterodimer Protein, His,Avitag&Tag Free, produced by co-expression of FCGRT and B2M, has a calculated MW of 28.3 kDa (FCGRT) & 11.5 kDa (B2M). Subunit FCGRT is fused with a polyhistidine tag at the C-terminus, followed by an Avi tag (Avitag™) and subunit Beta-2 microglobulin (B2M) contains no tag at the C-terminus. The protein migrates as 38-40 kDa (FCGRT) and＜14.4 kDa (B2M) under reducing (R) condition (SDS-PAGE) due to glycosylation.

Labeling

Biotinylation of this product is performed using Avitag™ technology. Briefly, the single lysine residue in the Avitag is enzymatically labeled with biotin.

Protein Ratio

Passed as determined by the HABA assay / binding ELISA.

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

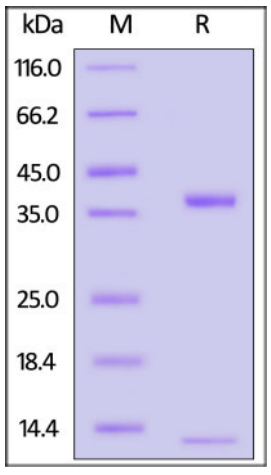
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

Please avoid repeated freeze-thaw cycles.

This product is stable after storage at:

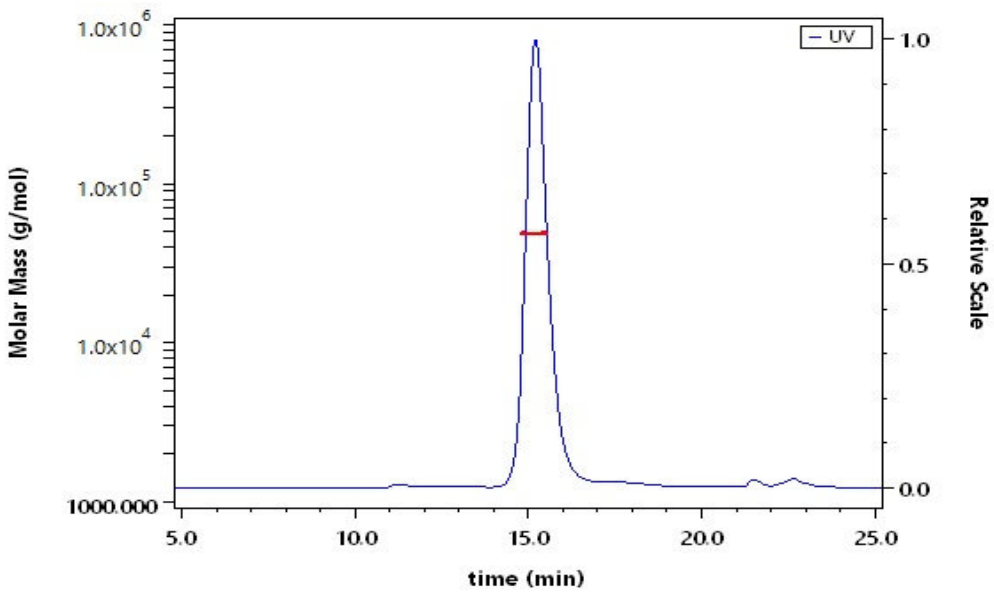
- -20°C to -70°C for 12 months in lyophilized state;
- -70°C for 3 months under sterile conditions after reconstitution.

SDS-PAGE



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

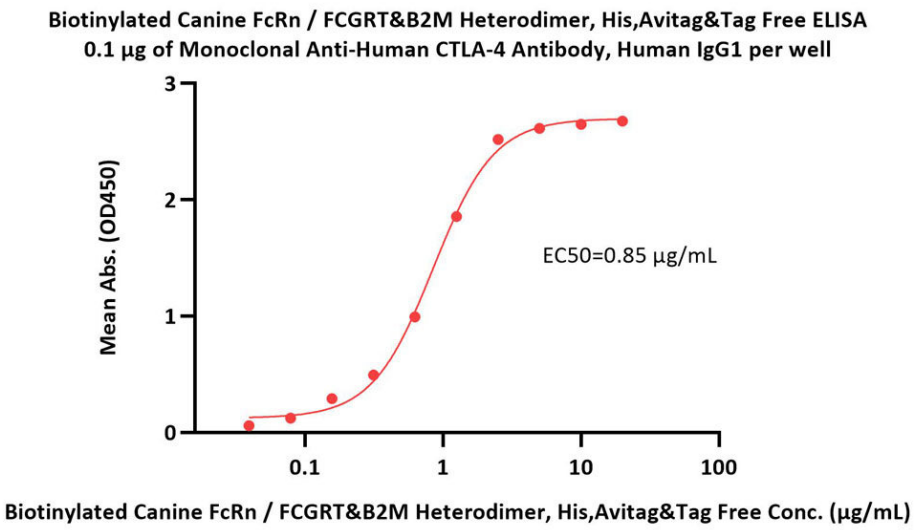
SEC-MALS



The purity of Biotinylated Canine FCGRT&B2M Heterodimer Protein, His,Avitag&Tag Free (Cat. No. FCM-C82W9) is more than 95% and the

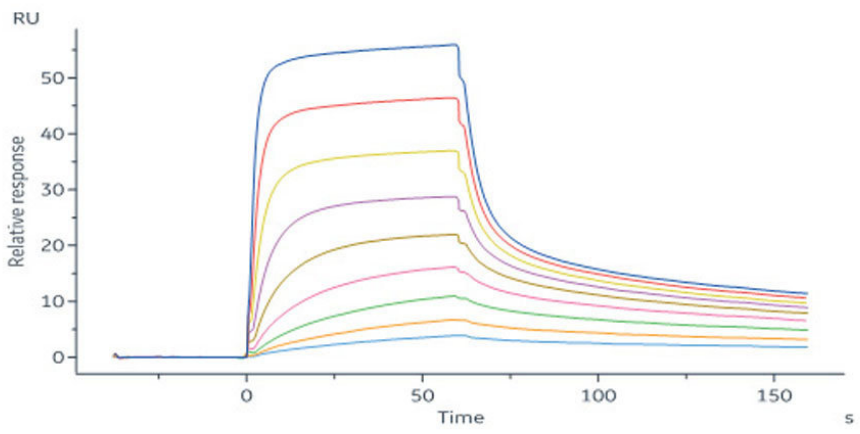
molecular weight of this protein is around 43-53 kDa verified by SEC-MALS.
Report

Bioactivity-ELISA

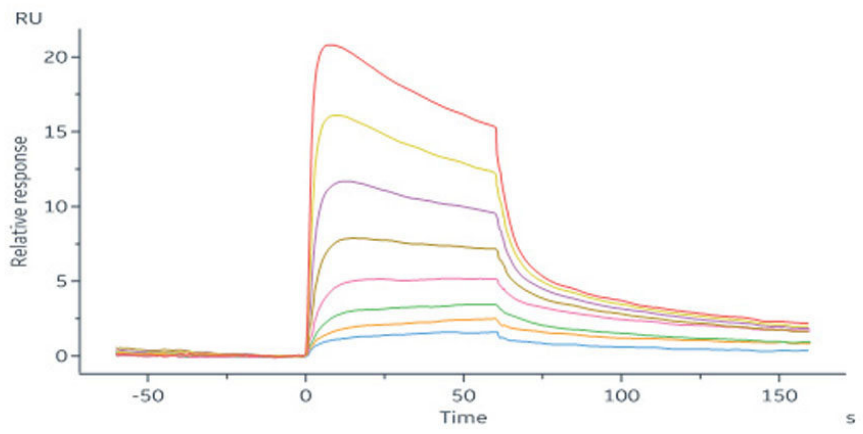


Immobilized Monoclonal Anti-Human CTLA-4 Antibody, Human IgG1 at 1 μg/mL (100 μL/well) can bind Biotinylated Canine FcRn / FCGRT&B2M Heterodimer, His,Avitag&Tag Free (Cat. No. FCM-C82W9) with a linear range of 0.039-2.5 μg/mL (Routinely tested).

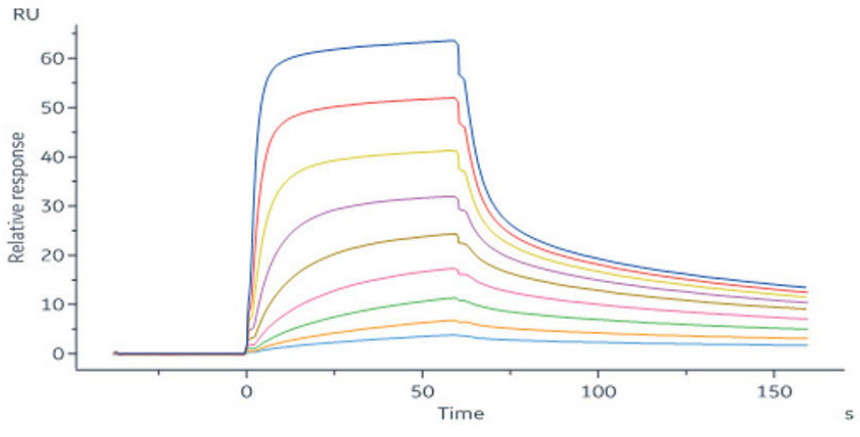
Bioactivity-SPR



Biotinylated Canine FCGRT&B2M Heterodimer, His,Avitag&Tag Free (Cat. No. FCM-C82W9) immobilized on SA Chip can bind Ipilimumab with an affinity constant of 42.5 nM as determined in a SPR assay (Biacore 8K) (QC tested).



Biotinylated Canine FCGRT&B2M Heterodimer, His,Avitag&Tag Free (Cat. No. FCM-C82W9) captured on CM5 chip via anti-His antibody can bind Ipilimumab with an affinity constant of 0.267 μM as determined in a SPR assay (Biacore 8K) (Routinely tested).



Biotinylated Canine FCGRT&B2M Heterodimer, His,Avitag&Tag Free (Cat. No. FCM-C82W9) immobilized on SA Chip can bind Trastuzumab with an

affinity constant of 44.6 nM 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.