

RP01037

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Recombinant Human FcRn Protein

Catalog No.: RP01037

Recombinant

Sequence Information

Species	Gene ID	Swiss Prot
Human	2217/567	P55899/P61769

Tags

C-His(FcGRT)&No tag(B2M)

Synonyms

FCRN

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 MHC class I molecules, MHC class I molecules have $\alpha 1$, $\alpha 2$, and $\alpha 3$ proteins which are present on all nucleated cells (excludes red blood cells) and B2M involved in the presentation of peptide antigens to the immune system.

Basic Information

Description

Recombinant Human FcRn Protein is produced by HEK293 cells expression system. The target heterodimer proteins are co-expressed with the sequence (Ala24-Ser297) of human FcGRT (Accession #NP_004098.1) fused with a 6xHis tag at the C-terminus and the sequence (Ile21-Met119) of human B2M (Accession #NP_004039.1).

Bio-Activity

1. Measured by its binding ability in a functional ELISA. Immobilized Human FcGRT&B2M at 5 $\mu\text{g/mL}$ (100 $\mu\text{L/well}$) can bind biotinylated human IgG1 with a linear range of 1-6 $\mu\text{g/mL}$. 2. Immobilized Trastuzumab on COOH Chip can bind Human FcGRT&B2M Heterodimer Protein with an affinity constant of 0.22 μM as determined in a SPR assay (OpenSPR).

Storage

Store the lyophilized protein at -20°C to -80 °C for long term. After reconstitution, the protein solution is stable at -20 °C for 3 months, at 2-8 °C for up to 1 week. Avoid repeated freeze/thaw cycles.

Product Information

Source	Purification
HEK293 cells	> 97% by SDS-PAGE.

Endotoxin

< 0.1 EU/ μg of the protein by LAL method.

Formulation

Lyophilized from a 0.22 μm filtered solution of PBS, pH 7.4. Contact us for customized product form or formulation.

Reconstitution

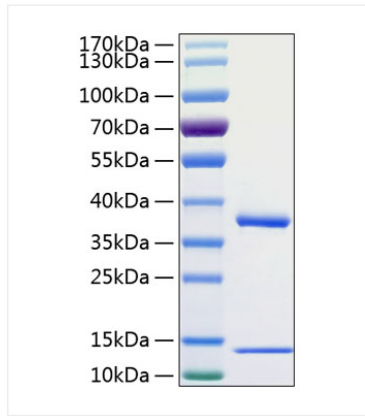
Centrifuge the vial before opening. Reconstitute to a concentration of 0.1-0.5 mg/mL in sterile distilled water. Avoid vortex or vigorously pipetting the protein. For long term storage, it is recommended to add a carrier protein or stabilizer (e.g. 0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose), and aliquot the reconstituted protein solution to minimize free-thaw cycles.

Contact

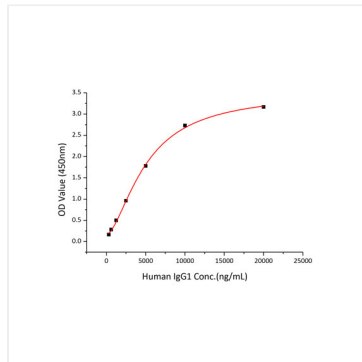


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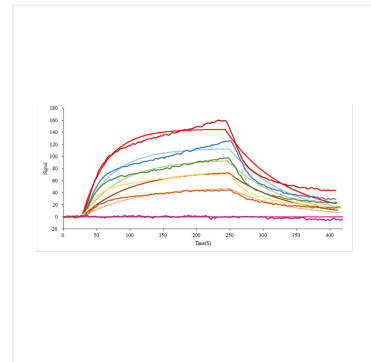
Validation Data



Recombinant Human FcRn Protein were determined by SDS-PAGE with Coomassie Blue, showing bands at 38&14 kDa.



Immobilized Human FCGR2B2M at 5 µg/mL (100 µL/well) can bind biotinylated human IgG1 with a linear range of 1-6 µg/mL.



Immobilized Trastuzumab on COOH Chip, can bind Human FCGR2B2M Heterodimer Protein with an affinity constant of 0.22 µM as determined in a SPR assay (OpenSPR).