

### Synonym

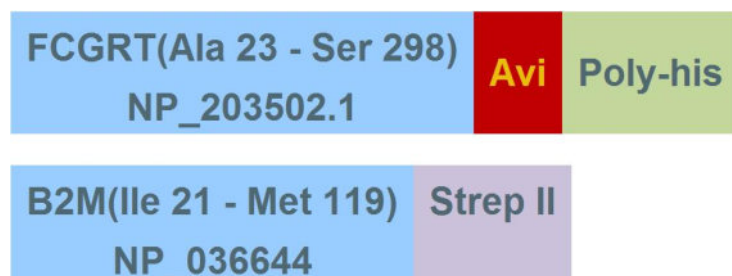
FcRn,FCGRT & B2M

### Source

MABSol® Biotinylated Rat FCGRT&B2M Heterodimer Protein, Avitag,His Tag&Strep II Tag (FCM-R82W7) is expressed from human HEK293 cells. It contains AA Ala 23 - Ser 298 (FCGRT) & Ile 21 - Met 119 (B2M) (Accession # NP\_203502 (FcRN) & NP\_036644 (B2M)).

Predicted N-terminus: Ala 23 (FCGRT) & Ile 21 (B2M)

### Molecular Characterization



The subunit FCGRT carries an Avi tag (Avitag™) at the C-terminus, followed by a polyhistidine tag. The subunit Beta-2 microglobulin (B2M) carries a Strep II tag at the C-terminus. The protein has a calculated MW of 34.7 kDa (FCGRT) and 13.1 kDa (B2M). The protein migrates as 45-50kDa (FCGRT) and 14 kDa (B2M) respectively on a SDS-PAGE gel under reducing (R) condition due to glycosylation.

### Biotinylation

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

### Biotin:Protein Ratio

The biotin to protein ratio is *0.5-1* as determined by the HABA assay.

### Endotoxin

Less than 1.0 EU per µg by the LAL method.

### Purity

>95% as determined by SDS-PAGE.

### 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

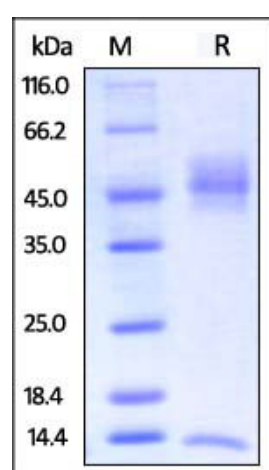
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

*Please avoid repeated freeze-thaw cycles.*

No activity loss was observed after storage at:

- 4-8°C for 12 months in lyophilized state;
- -70°C for 3 months under sterile conditions after reconstitution.

### SDS-PAGE

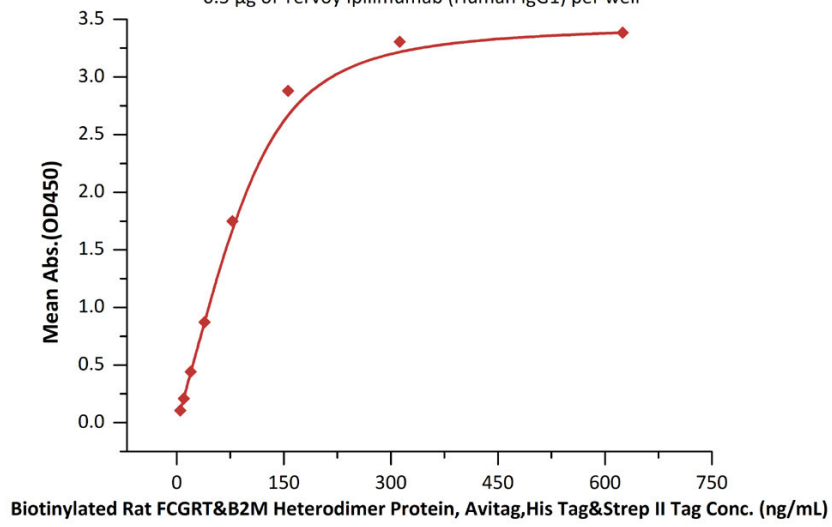


Biotinylated Rat FCGRT&B2M Heterodimer Protein, Avitag,His Tag&Strep II Tag on SDS-PAGE under reducing (R) condition. The gel was stained overnight with Coomassie Blue. The purity of the protein is greater than 95%.

### Bioactivity-ELISA

## Biotinylated Rat FCGRT&amp;B2M Heterodimer Protein, Avitag,His Tag&amp;Strep II Tag ELISA

0.5 µg of Yervoy Ipilimumab (Human IgG1) per well



Immobilized Yervoy Ipilimumab (Human IgG1) at 5 µg/mL (100 µL/well) can bind Biotinylated Rat FCGRT&B2M Heterodimer Protein, Avitag,His Tag&Strep II Tag (Cat. No. [FCM-R82W7](#)) with a linear range of 2-156 ng/mL (QC 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.

### References

- (1) [Goebel NA., et al., 2008, Mol. Biol. Cell 19 \(12\): 5490–505.](#)
- (2) [Lee TY., et al., 2008, Clin. Cancer Res. 14 \(5\): 1487–93.](#)
- (3) [Güssow D., et al., 1987, J. Immunol. 139 \(9\): 3132–8.](#)
- (4) [Gorevic P.D., et al., 1986, Proc. Natl. Acad. Sci. U.S.A. 83:7908-7912.](#)

Please contact us via [TechSupport@acrobiosystems.com](mailto:TechSupport@acrobiosystems.com) if you have any question on this product.