Datasheet

Biotinylated Human FcRn / FCGRT & B2M, Avi Tag (Avitag™)

Catalog # AMS.FCM-H82W4

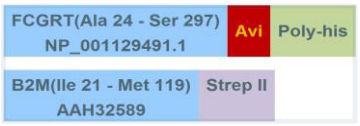
For Research Use Only

Description

Source MABSol® Biotinylated Human FcRn / FCGRT & B2M Heterodimer Protein (AMS.FCM-H82W4) is expressed from human HEK293 cells. It contains AA Ala 24 - Ser 297 (FCGRT) & Ile 21 - Met 119 (B2M) (Accession # NP_001129491.1 (FCGRT) & AAH32589 (B2M)).Predicted N-terminus: Ala 24(FCGRT) & Ile 21(B2M)

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

Protein Structure



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 33 kDa (FCGRT), 13.1 kDa (B2M) . The protein migrates as 36 kDa (FCGRT), 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.

Bioactivity Measured by its binding ability in a functional ELISA. Immobilized Yervoy Ipilimumab (Human IgG1) at 10 μg/mL (100 μL/well) can bind Biotinylated Human FcRn / FCGRT & B2M (Cat# AMS.FCM-H82W4) with a linear range of 0.02-1.25 μg/mL (QC tested). BiotinylatedHuman FcRn / FCGRT & B2M, Avi Tag (Avitag™) (Cat.# AMS.FCM-H82W4) coupled to SA coated sensor chip can bind trastuzumab withan affinity constant of 2.2-2.6 μM as determined in a SPR assay (Biacore 2000). The data is generally provided by Biaffin GmbH &CoKG, Germany (Routinely tested).

Formulation and Storage

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℃ for 12 months in lyophilized state;
- -70℃ for 3 months under sterile conditions after reconstitution.

Background

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) Goebl 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.

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Biotinylated Human FcRn / FCGRT & B2M, Avi Tag (Avitag™)

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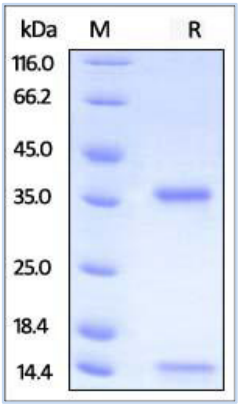
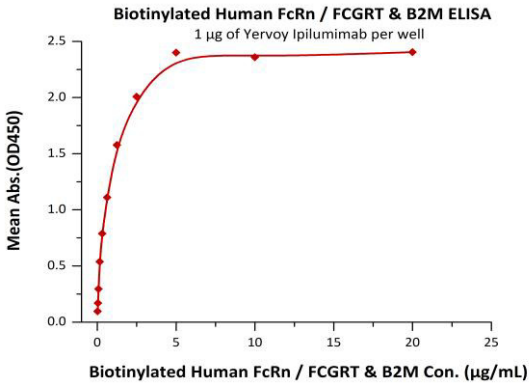
Assay Data

SDS-PAGE Data



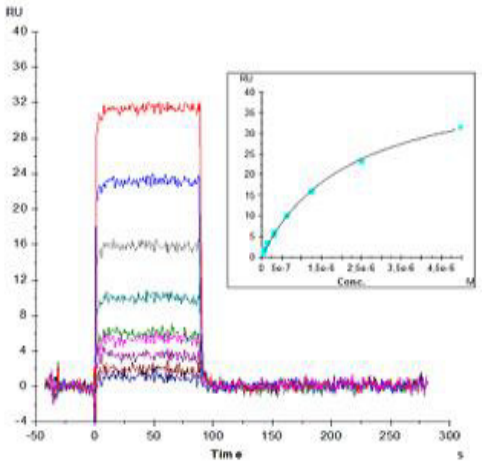
Biotinylated Human FcRn / FCGRT & B2M on SDS-PAGE under reducing (R) condition. The gel was stained overnight with Coomassie Blue. The purity of the protein is greater than 95%.

Bioactivity Data-1



Immobilized Yervoy Ipilimumab (Human IgG1) at 10 μg/mL (100 μL/well) can bind Biotinylated Human FcRn / FCGRT & B2M (Cat# AMS.FCM-H82W4) with a linear range of 0.02-1.25 μg/mL (QC tested).

Bioactivity Data-2



Biotinylated Human FcRn / FCGRT & B2M, Avi Tag (Avitag™) (Cat.# AMS.FCM-H82W4) coupled to SA coated sensor chip can bind trastuzumab with an affinityconstant of 2.2-2.6 μM as determined in a SPR assay (Biacore 2000). The data is generally provided by Biaffin

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