

Datasheet

Biotinylated Human FcRn / FCGR2 & B2M, ultra sensitivity (primary amine labeling)

Catalog # AMS.FCM-H8286-25ug

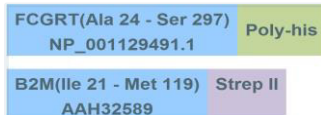
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Description

Source MABSol® Biotinylated Human FcRn / FCGR2 & B2M (FCM-H8286) is expressed from human HEK293 cells. It contains AA Ala 24 - Ser 297 (FCGR2) & Ile 21 - Met 119 (B2M) (Accession # NP_001129491.1 (FCGR2) & AAH32589 (B2M)). It is the biotinylated form of Human FcRn / FCGR2 & B2M Heterodimer Protein (Cat # FCM-H5286). Predicted N-terminus: Ala 24(FCGR2) & Ile 21(B2M)

Predicted N-terminus Ala 24(FCGR2) & Ile 21(B2M)

Protein Structure



Molecular Characterization The subunit FCGR2 carries a polyhistidine tag at the C-terminus. The subunit B2M carries a Strep II tag at the C-terminus. The protein has a calculated MW of 31.2 kDa (FCGR2), 13.1 kDa (B2M). The protein migrates as 33 kDa (FCGR2), 13 kDa (B2M) respectively on a SDS-PAGE gel under reducing (R) condition due to glycosylation.

Biotinylation The primary amines in the side chains of lysine residues and the N-terminus of the protein are conjugated with biotins using standard chemical labeling method. A standard biotin reagent (13.5 angstroms) is used in this product.

Biotin:Protein Ratio The biotin to protein ratio is 3-4 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 / FCGR2 & B2M (Cat# FCM-H8286) with a linear range of 0.02-0.15 µg/mL (QC 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°C for 12 months in lyophilized state;
 - -70°C for 3 months under sterile conditions after reconstitution.

Background

Background FCGR2 & B2M heterodimer protein (FcRn complex) consist of two subunits: p51 (equivalent to FCGR2), and p14 (equivalent to beta-2-microglobulin), and forms an MHC class I-like heterodimer. Fc fragment of IgG, receptor, transporter, alpha (FCGR2) binds to the Fc region of monomeric immunoglobulins gamma and mediates the uptake of IgG from milk. FCGR2 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.

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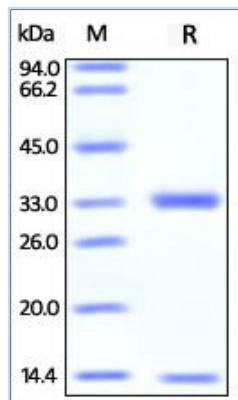
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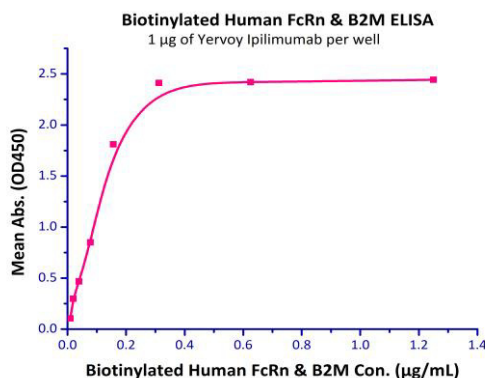
Assay Data

SDS-PAGE Data

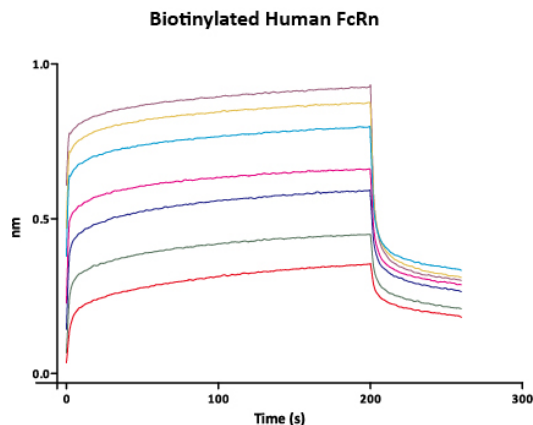


Biotinylated Human FcRn / FCGR2 & B2M on SDS-PAGE under reducing (R) condition. The gel was stained overnight with Coomassie Blue. The purity of the protein is greater than 95%.

Bioactivity Data



Immobilized Yervoy Ipilimumab (Human IgG1) at 10 µg/mL (100 µL/well) can bind Biotinylated Human FcRn / FCGR2 & B2M (Cat# FCM-H8286) with a linear range of 0.02-0.15 µg/mL (QC tested).



Immobilized Biotinylated Human FcRn / FCGR2 & B2M Heterodimer Protein (Cat. No. FCM-H8286) on SA Biosensor, can bind Herceptin with an affinity constant of 0.49 µM as determined in BLI assay (Fortebio Octet 96) (Routinely tested).

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