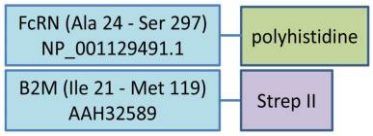
Datasheet

Human FcRn / FCGRT & B2M Heterodimer Protein

Catalog # AMS.FCM-H5286

For Research Use Only

Description

Source	Human FcRn / FCGRT & B2M heterodimer protein, Ala 24 - Ser 297 (FCGRT, NP_001129491.1) and & Ile 21 - Met 119 (B2M, AAH32589), was produced in human 293 cells (HEK293)
Predicted N-terminus	Ala 24(FcRN) & Ile 21(B2M)
Protein Structure	
Molecular Characterization	Human FcRn / FCGRT & B2M heterodimer protein, produced by co-expression of FcRN and B2M, has a calculated MW of 31.2 kDa (FCGRT / FcRN) and 13.1 kDa (B2M). Subunit FCGRT / FcRN is fused with his-tag at the C-terminus and subunit Beta-2 microglobulin (B2M) is fused with Strep II-tag at the C-terminus. The predicted N-terminus is Ala 24(FcRN) & Ile 21(B2M). The reducing (R) protein migrates as 33 kDa (FCGRT) and 13 kDa (B2M) respectively due to glycosylation.
Endotoxin	Less than 1.0 EU per µg by the LAL method.
Purity	>95% as determined by SDS-PAGE.
Bioactivity	1.Measured by its binding ability in a functional ELISA.Immobilized Yervoy Ipilimumab (Human IgG1) at 10 µg/mL (100 µL/well) can bind Human FcRn / FCGRT & B2M (Cat# FCM-H5286) with a linear range of 0.06-5 µg/mL. 2.Measured by its binding ability to human IgG1 in a SPR assay (Biacore 2000). Immobilized Human FcRn / FCGRT & B2M can bind human IgG1 with affinity constant of uM range.

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.

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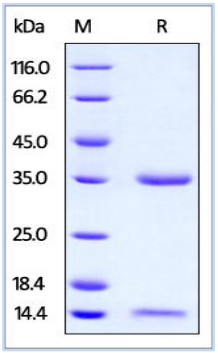
Assay Data

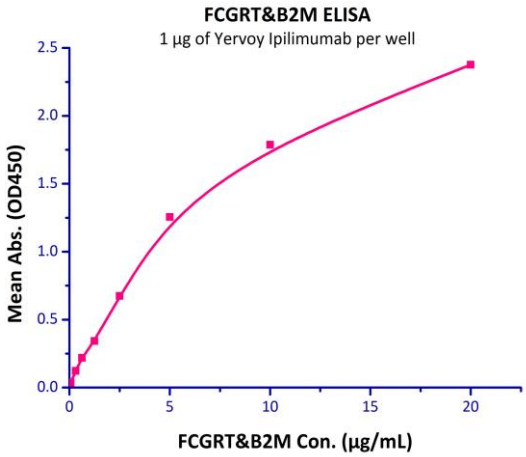
SDS-PAGE Data

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

Immobilized Yervoy Ipilimumab (Human IgG1) at 10 µg/mL (100 µL/well) can bind Human FcRn / FCGRT & B2M (Cat# AMS.FCM-H5286) with a linear range of 0.06-5 µ g/mL.



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