

Recombinant human FCRN/FCGRT&B2M protein

Catalog Number: ATGP4138

PRODUCT INFORMATION

Expression system

HEK293

Domain

24-297aa(FCGRT), 21-119aa(B2M)

UniProt No.

P55899(FCGRT), P61769(B2M)

NCBI Accession No.

NP_004098.1(FCGRT), NP_004039.1(B2M)

Alternative Names

FCGRT, IgG Fc fragment receptor transporter alpha chain, IgG receptor FcRn large subunit p51 isoform1, Fcgrt, FcRn, Fc gamma receptor and transporter, FcgammaRn, Transmembrane alpha chain of the neonatal receptor, Neonatal Fc receptor, FCRN, alpha-chain, Beta-2-microglobulin, IMD43, CDABP0092, HDCMA22P

PRODUCT SPECIFICATION

Molecular Weight

31.1kDa(FCGRT, 280aa)

11.7kDa(B2M, 99aa)

Concentration

0.25mg/ml (determined by Absorbance at 280nm)

Formulation

Liquid in. Phosphate-Buffered Saline (pH 7.4) containing 10% glycerol

Purity

> 95% by SDS-PAGE

Endotoxin level

< 1 EU per 1ug of protein (determined by LAL method)

Biological Activity

Measured by its binding ability in a functional ELISA with Human IgG1 Fc (CAT# ATGP4094).

Tag

His-Tag

Application

SDS-PAGE, Bioactivity

Storage Condition

Can be stored at +2C to +8C for 1 week. For long term storage, aliquot and store at -20C to -80C. Avoid repeated freezing and thawing cycles.

Recombinant human FCRN/FCGRT&B2M protein

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BACKGROUND

Description

FCRN/FCGRT, also known as IgG receptor FcRn large subunit p51, is an IgG Fc receptor which is similar in structure to the MHC class I molecule and also associates with beta-2-microglobulin. This protein is widely expressed in endothelial and epithelial cells and plays an important role in IgG homeostasis. Also, it is expressed in neutrophils and myeloid antigen presenting cells. It is present in the placenta where it transports mother's IgG to the growing fetus. In addition to binding to IgG, it has been shown to interact with human serum albumin. FCRN/FCGRT-mediated transcytosis of IgG across epithelial cells is possible because FCRN binds IgG at acidic pH but not at neutral or higher pH. B2M, also known as beta 2-Microglobulin, is a component of MHC class I molecules, Involved in the presentation of peptide antigens to the immune system. It is a protein found on the surface of many cells and plentiful on the surface of white blood cells. B2M associates not only with the alpha chain of MHC class I molecules, but also with class I-like molecules such as CD1, MR1, the neonatal Fc receptor (FCRN/FCGRT), and Qa-1. Recombinant human FCGRT fused to His-tag at C-terminus, and B2M was expressed in HEK293 cell and purified by using conventional chromatography techniques.

Amino acid Sequence

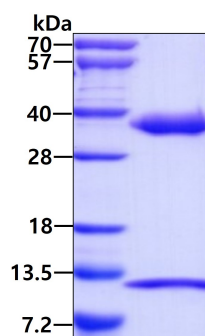
FCGRT
 AESHLSLLYH LTAVSSPAPG TPAFWVSGWL GPQQYLSYNS LRGEAEPGGA WVENQVSWY WEKETDLRI KEKLFLEAFK
 ALGGKGPYTL QLLGCELGP DNTSVPTAKF ALNGEEFMNF DLKQGTWGGD WPEALAISQR WQQQDKAANK ELTFLFSCP
 HRLREHLERG RGNLEWKEPP SMRLKARPSS PGFSVLTCSA FSFYPPQL RFLRNGLAAG TGQDGFNPNS DGSFHASSSL
 TVKSGDEHHY CCIVQHAGLA QPLRVELESP AKSS<HHHHHH>
 B2M
 IQRTPKIQVY SRHPAENGKS NFLNCYVSGF HPSDIEVDLL KNGERIEKVE HSDLFSKDW SFYLLYTEF TPTEKDEYAC
 RVNHVTLSP KIVKWDRDM

General References

Akilesh, S. et al. (2008) Proc. Natl. Acad. Sci. 105:967-972.
 Morabito A., et al. (2009) Hum Immunol. 70:492-495.

DATA

SDS-PAGE



3ug by SDS-PAGE under reducing condition and visualized by coomassie blue stain

Biological Activity

Recombinant human FCRN/FCGRT&B2M protein

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Human FCRN/ FCGRT&B2M is coated at 10 ug/ml (100 ul/well) can bind Human IgG1 Fc (CAT# ATGP4094) in a Functional ELISA assay.

