

Biotinylated human FcRn (FCGRT-B2M) heterodimer protein

Catalog number HUFCRN-B



Synonyms

FcRn, FCGRT, FCGRT & B2M, FCGRT and B2M, Neonatal Fc receptor, Neonatal receptor, Brambell receptor

Species

Human

Accession number

P55899 / P61769

Allotype

Not applicable

Conjugation status

Biotinylated. Biotin to protein ratio is confirmed as 0.7-1.0 by the HABA assay. Product has been site-specifically biotinylated using the AVI tag technology, where the lysine residue within the tag is enzymatically labeled with biotin.

Purity

>95% monomer purity as determined by SDS-PAGE and SEC-HPLC.

Endotoxin

<1.0 EU per mg as determined by the LAL method.

Protein design

The sequence of the extracellular domain of human FCGRT (Ala 24-Ser 297) was fused with a C-terminal tag consisting of the AVI tag, TEV protease recognition sequence and a 10-His tag. This was co-transfected with the sequence of human B2M (Ile 21-Met 119)

Molecular weight

The recombinant FcRn heterodimer including tags consists of 412 amino acids and has a theoretical mass of 46570 Da. The heterodimer consists of human FCGRT (313 amino acids; 34839 Da) and human B2M (99 amino acids; 11731 Da).

Expression host

Human embryonic kidney (HEK) 293 cells.

Formulation

Lyophilized from sterile PBS, pH 7.4. No preservatives or cryoprotectants have been added.

Reconstitution

To obtain a final concentration of 1 mg/ml reconstitute 250 µg vials with 250 µl water and 1.0 mg vials with 1.0 ml water. Solubilize for 30 to 60 minutes at room temperature with occasional gentle mixing. Do not vortex.

Shipping

All recombinant proteins are provided as lyophilized powder and shipped at ambient temperature.

Storage and stability

Lyophilized proteins are stable at ambient temperature for at least 2 weeks. If the protein is not to be used immediately then the protein should be stored in lyophilized form at -20 °C for up to 12 months. Once the protein has been reconstituted we recommend storage at 4 °C for up to one week. For longer term storage of protein in solution we recommend aliquoting into smaller vials to avoid repeated freeze-thaw cycles and storage at -20 or -80 °C for up to 3 months.

Quality control

All recombinant proteins are tested for purity by SDS-PAGE and SEC-HPLC with a minimum requirement of >95% monomer purity. Biological activity is confirmed by surface plasmon resonance on a Biacore instrument. Please see certificate of analysis (COA) for batch specific quality control data and images.

Product description

IgG Fc fragment receptor transporter, also known as the neonatal Fc receptor or more commonly FcRn, consist of two subunits (FCGRT and B2M) and forms an MHC class I-like heterodimer. FcRn binds to the Fc domain of monomeric IgG and mediates the pH dependent recycling of IgG as well as its uptake from milk and transfer from mother to fetus.

For research use only. Not for use in diagnostic or therapeutic procedures.

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