

Biotinylated human Fc gamma RI / CD64 protein

Catalog number HUGR1-B

Synonyms

CD64, CD64A, FCGR1, FCGRI, FCGR1A, FCGRIA, FCR1, FCRI, IGFR1, IGFR1, Fc gamma R1, Fc gamma RI, Fcg R1, Fcg RI

Species

Human

Accession number

P12314

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 CD64 (Gln 16-Leu 281) was fused with a C-terminal tag consisting of the AVI tag, TEV protease recognition sequence and a 10-His tag. The full protein sequence can be downloaded from the product webpage.

Molecular weight

The recombinant human CD64 including tag consists of 305 amino acids and has a theoretical mass of 34376 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

High affinity immunoglobulin gamma Fc receptor I, also known as FcγRI or CD64, is a type I integral membrane glycoprotein. CD64 is a member of the immunoglobulin superfamily and is expressed on monocytes, macrophages, dendritic cells and activated granulocytes. CD64 binds with high affinity to the Fc domain of IgG and it plays a role in antigen capture, phagocytosis of IgG/antigen complexes, and antibody-dependent cellular cytotoxicity (ADCC). CD64 is structurally composed of three extracellular immunoglobulin domains of the C2-type that interact with the IgG Fc domain, a transmembrane domain and a short cytoplasmic tail. CD64 is associated with a dimer of the common Fc receptor gamma-chain which contains the immunoreceptor tyrosine-based activation (ITAM) motif. The product provided only contains the extracellular portion of CD64.

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

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