

Human Fc gamma RIIIb / CD16b (NA1) protein

Catalog number HUGR3B1-U

Synonyms

CD16, CD16B, FCGR3, FCGR3B, FCGRIII, FCGRIIIb, FCR3, FCR3B, FCRIII, FCRIIIb, IGFR3, IGFR3B, IGFRIII, IGFRIIIb, Fc gamma R3, Fc gamma R3b, Fc gamma RIII, Fc gamma RIIIb, Fcg R3, Fcg R3b, Fcg RIII, Fcg RIIIb

Species

Human

Accession number

O75015

Allotype

NA1

Conjugation status

Unconjugated (no label). The protein contains an AVI tag but this has not been biotinylated in this product.

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 CD16b (Gly 17-Ser 200) 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 CD16b (NA1) including tag consists of 223 amino acids and has a theoretical mass of 25372 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

Low affinity immunoglobulin gamma Fc receptor IIIb, also known as FcγRIIIb or CD16b, is a glycosylphosphatidylinositol (GPI) anchored glycoprotein. CD16b is a member of the immunoglobulin superfamily and is expressed on exclusively on neutrophils. CD16b binds monomeric IgG with low affinity but is efficient at binding immune complexes and acts as a decoy with no known signaling mechanism. CD16b is structurally composed of two extracellular immunoglobulin domains of the C2-type that interact with the IgG Fc domain and a GPI membrane anchor with no cytoplasmic tail. The product provided only contains the extracellular portion of CD16b.

CD16b has two allotypic variants, referred to as human neutrophil antigen 1 (NA1 or HNA1a) and 2 (NA2 or HNA1b). The allotypes have differing affinities to human IgG1 and IgG3 with the NA1 form capable of better ingestion of IgG1 or opsonized IgG3 particles than NA2.

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

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