# Biotinylated Human Fc gamma RIIIB / CD16b (NA2) Protein, His,Avitag™ (SPR & BLI & MALS verified)

Catalog # CDB-H82Ea

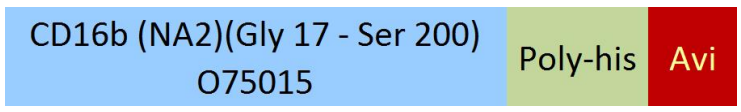
## Synonym

Fc gamma RIIIB,CD16b (NA2),FCGR3B,CD16B,FCG3B,FCGR3,FCG3,IGFR3

## Source

Biotinylated Human CD16b (NA2), His,Avitag (CDB-H82Ea) is expressed from human 293 cells (HEK293). It contains AA Gly 17 - Ser 200 (Accession # O75015). The NA1 form of the CD16b differ with the NA2 form of CD16b in AA36, 65, 82, and 106. The NA1 form carries R36, N65, D82, and V106, while the NA2 form carries S36, S65, N82, and I106.
Predicted N-terminus: Gly 17

## Molecular Characterization




This protein carries a polyhistidine tag at the C-terminus, followed by an Avi tag (Avitag™).

The protein has a calculated MW of 24.5 kDa. The protein migrates as 37-55 kDa when calibrated against Star Ribbon Pre-stained Protein Marker under reducing (R) condition (SDS-PAGE) due to glycosylation.

## Labeling

***Biotinylation of this product is performed using Avitag™ technology. Briefly, the single lysine residue in the Avitag is enzymatically labeled with biotin.***

## Protein Ratio

Passed as determined by the HABA assay / binding ELISA.

## Purity

>95% as determined by SDS-PAGE.

>90% as determined by SEC-MALS.

## Formulation

Lyophilized from 0.22 μm filtered solution in PBS, pH7.4 with trehalose as protectant.

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

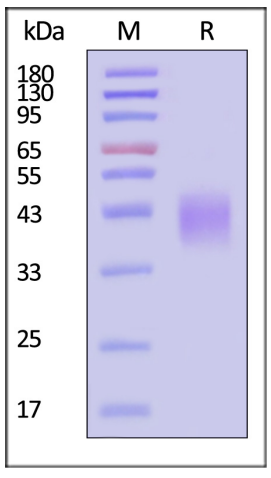
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

***Please avoid repeated freeze-thaw cycles.***

This product is stable after storage at:

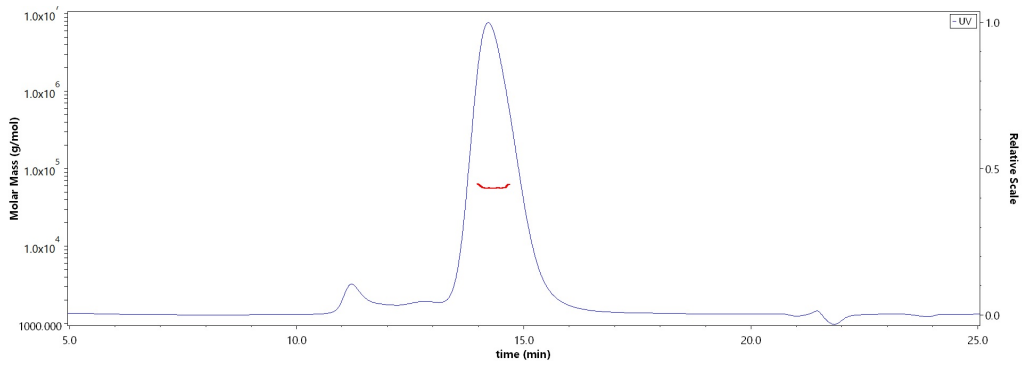
- -20°C to -70°C for 12 months in lyophilized state;
- -70°C for 12 months under sterile conditions after reconstitution.

## SDS-PAGE




Biotinylated Human CD16b (NA2), His,Avitag on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 95% (With Star Ribbon Pre-stained Protein Marker).

## SEC-MALS

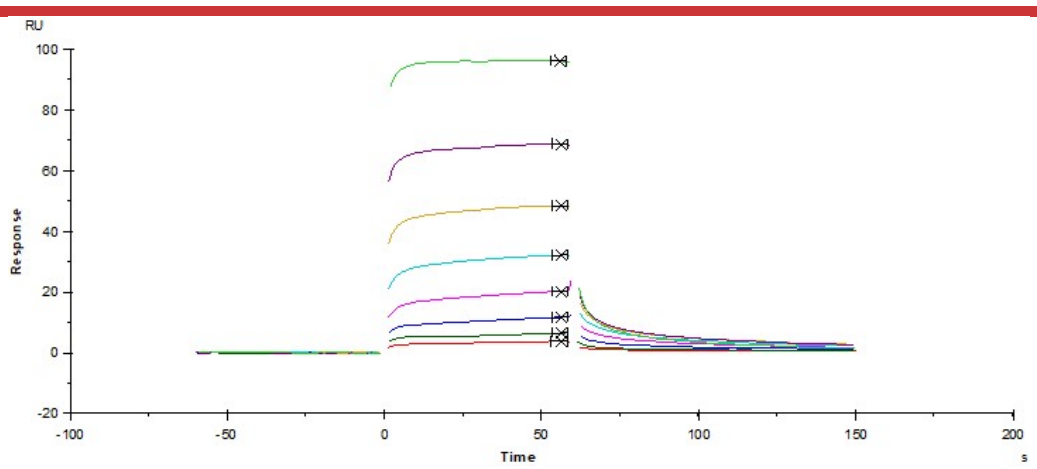



The purity of Biotinylated Human CD16b (NA2), His,Avitag (Cat. No. CDB-H82Ea) is more than 90% and the molecular weight of this protein is around 35-60 kDa verified by SEC-MALS.
Report

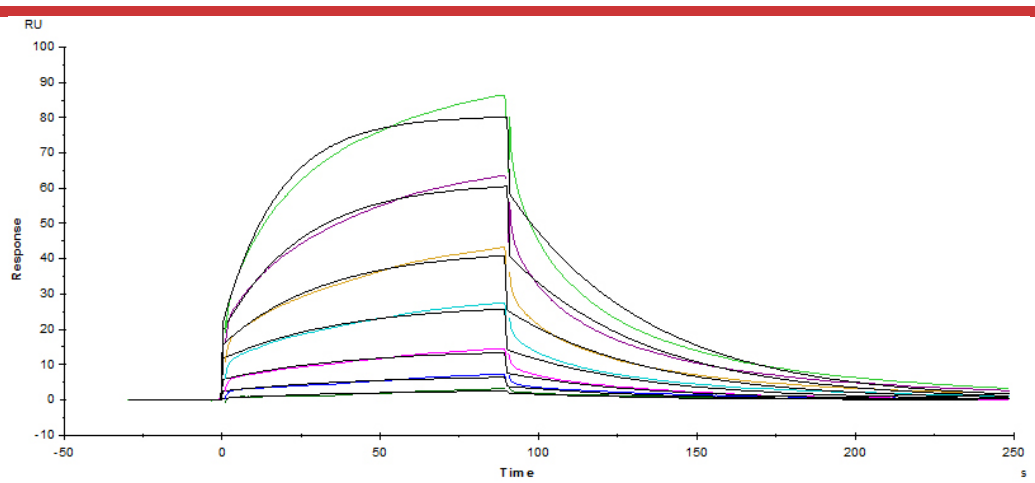
## Bioactivity-SPR

# Biotinylated Human Fc gamma RIIIB / CD16b (NA2) Protein, His,Avitag™ (SPR & BLI & MALS verified)

Catalog # CDB-H82Ea

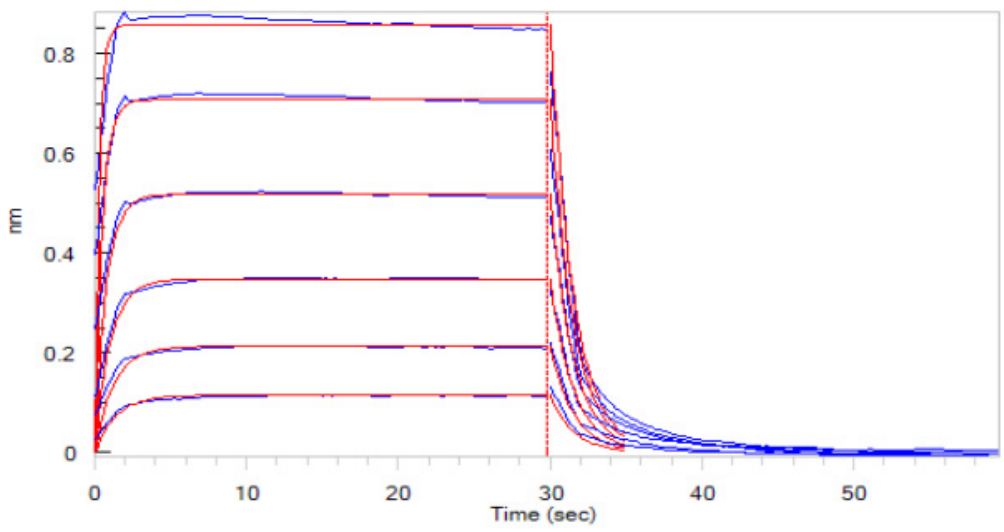



Biotinylated Human CD16b (NA2), His,Avitag (Cat. No. CDB-H82Ea) on Biotin CAP - Series S sensor Chip can bind Rituximab biosimilar (Cat. No. CD0-M36) with an affinity constant of 5.13 μM as determined in a SPR assay (Biacore T200) (QC tested).




Immobilized Biotinylated Human CD16b (NA2), His,Avitag (Cat. No. CDB-H82Ea) on SA Chip can bind Rituximab with an affinity constant of 6.66 μM as determined in a SPR assay (Biacore T200) (Routinely tested).

## Bioactivity-BLI




Loaded Biotinylated Human CD16b (NA2), His,Avitag (Cat. No. CDB-H82Ea) on SA Biosensor, can bind Rituximab with an affinity constant of 5.3 μM as determined in BLI assay (ForteBio Octet Red96e) (Routinely tested).

## Background

CD16 is a low affinity Fc receptor, and has been identified as Fc receptors FcγRIIIa (CD16a) and FcγRIIIb (CD16b). These receptors bind to the Fc portion of IgG antibodies. CD16 encoded by two different highly homologous genes in a cell type-specific manner.CD16 is found on the surface of natural killer cells, neutrophil polymorphonuclear leukocytes, monocytes and macrophages.

CD16B is also kown as FCGR3B and FCG3B, is expressed specifically by polymorphonuclear leukocytes (neutrophils) and stimulated eosinophils. CD16B is the low affinity receptor for the Fc region of immunoglobulins gamma. FCGR3B binds complexed or aggregated IgG and also monomeric IgG. Contrary to III-A, FCG3B is not capable to mediate antibody-dependent cytotoxicity and phagocytosis. CD16B may serve as a trap for immune complexes in the peripheral circulation which does not activate neutrophils.