

**Synonym**

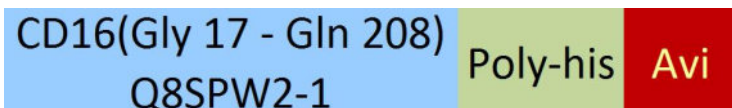
FCGR3

**Source**

Biotinylated Cynomolgus CD16, His,Avitag(FC6-C82E0) is expressed from human 293 cells (HEK293). It contains AA Gly 17 - Gln 208 (Accession # [Q8SPW2-1](#)).

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 25.7 kDa. The protein migrates as 36-45 kDa 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.

**Endotoxin**

Less than 1.0 EU per µg by the LAL method.

**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**

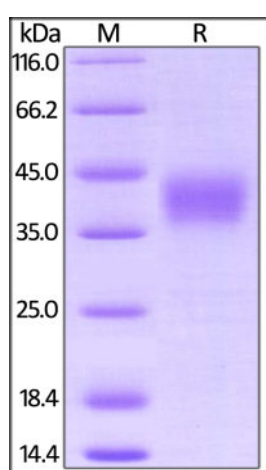
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

*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 3 months under sterile conditions after reconstitution.

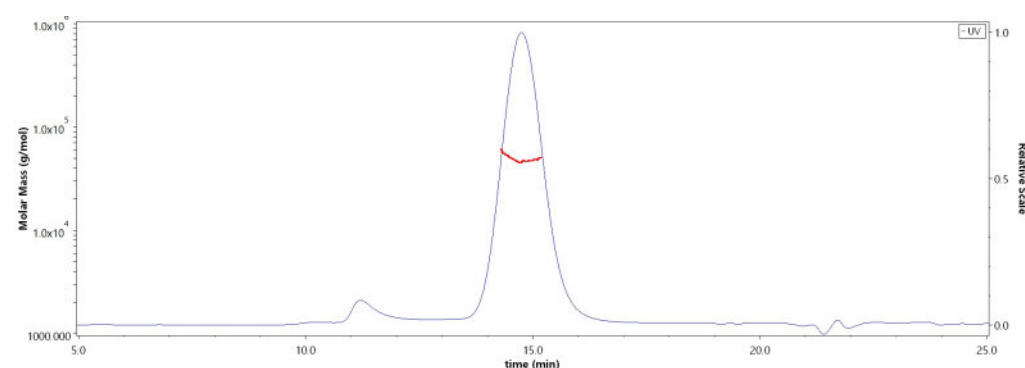
**SDS-PAGE**



Biotinylated Cynomolgus CD16, 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%.

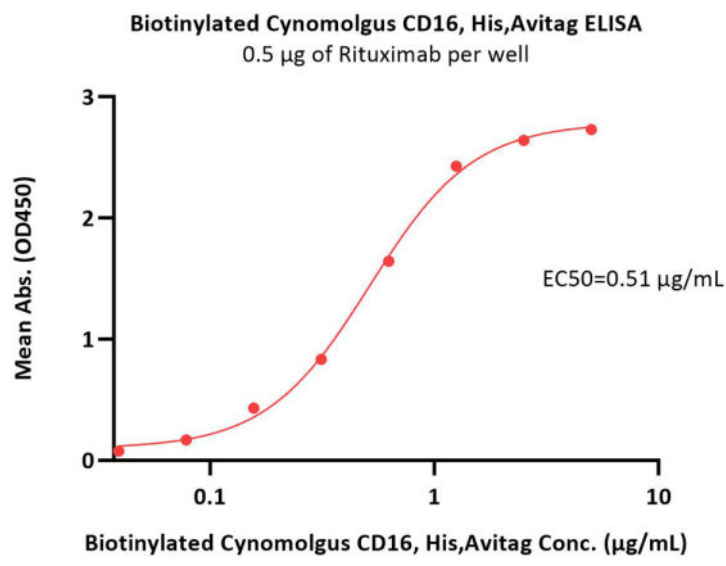
**Bioactivity-ELISA**

**SEC-MALS**



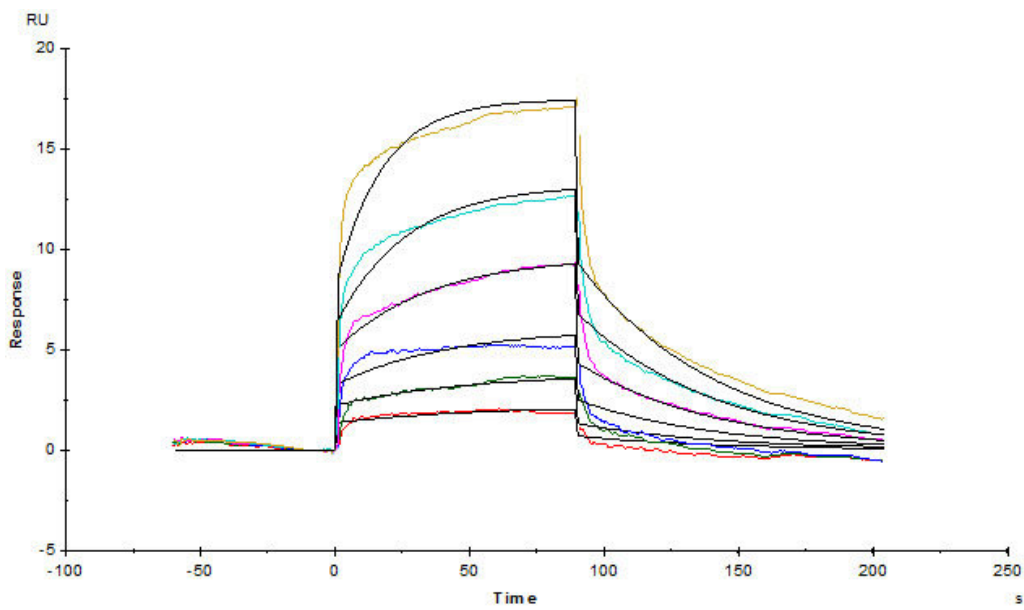
The purity of Biotinylated Cynomolgus CD16, His,Avitag (Cat. No. FC6-C82E0) is more than 90% and the molecular weight of this protein is around 45-55 kDa verified by SEC-MALS.

[Report](#)



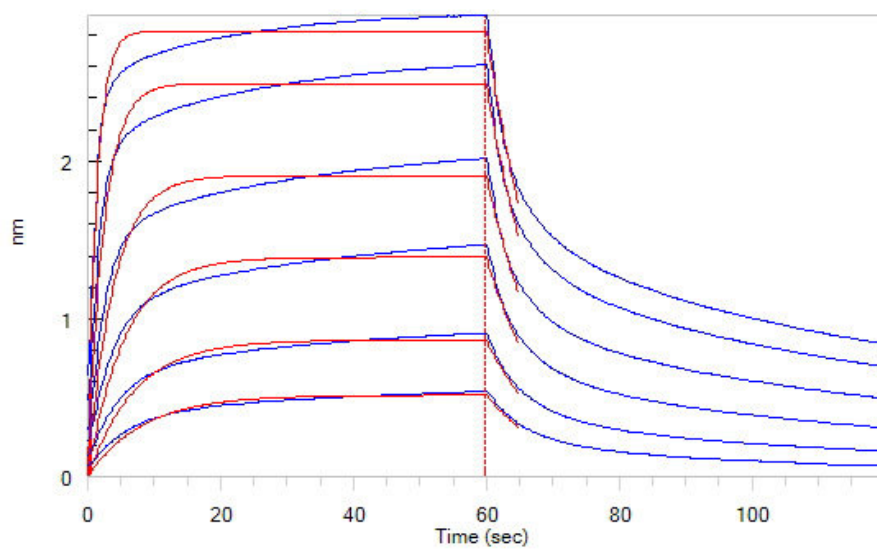
Immobilized Rituximab at 5 µg/mL (100 µL/well) can bind Biotinylated Cynomolgus CD16, His,Avitag (Cat. No. FC6-C82E0) with a linear range of 0.039-1.25 µg/mL (QC tested).

**Bioactivity-SPR**



Captured Biotinylated Cynomolgus CD16, His,Avitag (Cat. No. FC6-C82E0) on Biotin CAP - Series S sensor Chip can bind MabThera® (Rituximab) with an affinity constant of 0.63 µM as determined in a SPR assay (Biacore T200) (Routinely tested).

**Bioactivity-BLI**



Catalog # FC6-C82E0

Loaded Biotinylated Cynomolgus CD16, His,Avitag (Cat. No. FC6-C82E0) on SA Biosensor, can bind Rituximab with an affinity constant of 0.401  $\mu$ M as determined in BLI assay (ForteBio Octet Red96e) (QC tested).

**Background**

CD16 is a low affinity Fc receptor, and has been identified as Fc receptors Fc $\gamma$ RIIIa (CD16a) and Fc $\gamma$ RIIIb (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.

CD16a antigen is also known as Low affinity immunoglobulin gamma Fc region receptor III-A, Fc-gamma RIII-alpha. CD16b is a low-affinity, GPI-linked receptor expressed by neutrophils and eosinophils, whereas CD16a is an intermediate affinity polypeptide-anchored transmembrane glycoprotein expressed natural killer cells, macrophages, subpopulation of T-cells, immature thymocytes and placental trophoblasts. CD16a is involved in phagocytosis, secretion of enzymes and inflammatory mediators, antibody dependent cytotoxicity and clearance of immune complexes. Aberrant expression or mutations of CD16a is implicated in susceptibility to recurrent viral infections, systemic lupus erythematosus, and alloimmune neonatal neutropenia.

**Clinical and Translational Updates**

Please contact us via [TechSupport@acrobiosystems.com](mailto:TechSupport@acrobiosystems.com) if you have any question on this product.