Biotinylated Mouse Fc gamma RI / CD64 Protein, His,Avitag™ (MALS & SPR verified)

Catalog # CD4-M82E7

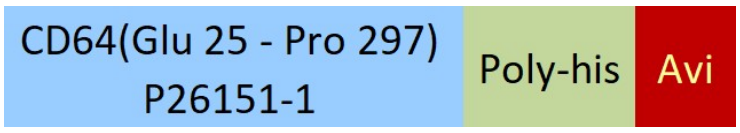
Synonym

FCGR1A,FCG1,FCGR1,IGFR1,CD64,CD64A,FCRI

Source

Biotinylated Mouse CD64, His,Avitag(CD4-M82E7) is expressed from human 293 cells (HEK293). It contains AA Glu 25 - Pro 297 (Accession # P26151-1). Predicted N-terminus: Glu 25

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 34.0 kDa. The protein migrates as 45-60 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.

Purity

>90% 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

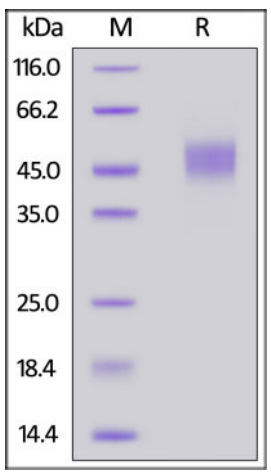
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

Please avoid repeated freeze-thaw cycles.

This product is stable after storage at:

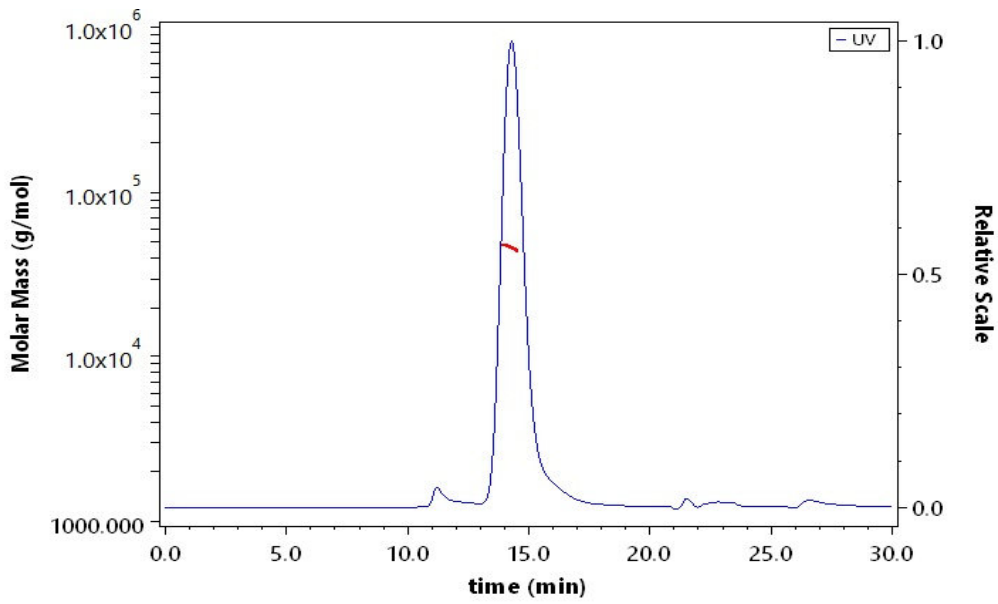
- -20°C to -70°C for 12 months in lyophilized state;
- -70°C for 12 months under sterile conditions after reconstitution.

SDS-PAGE



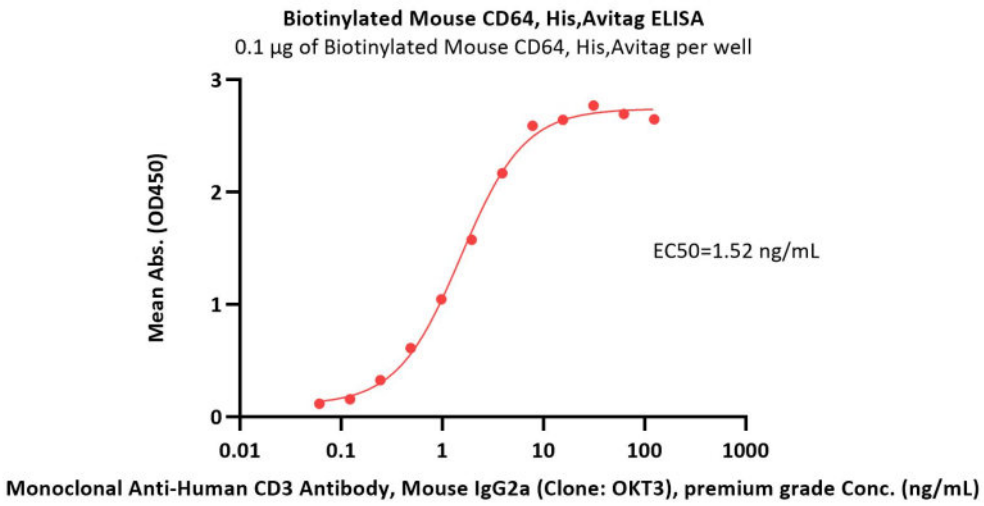
Biotinylated Mouse CD64, His,Avitag on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 90%.

SEC-MALS



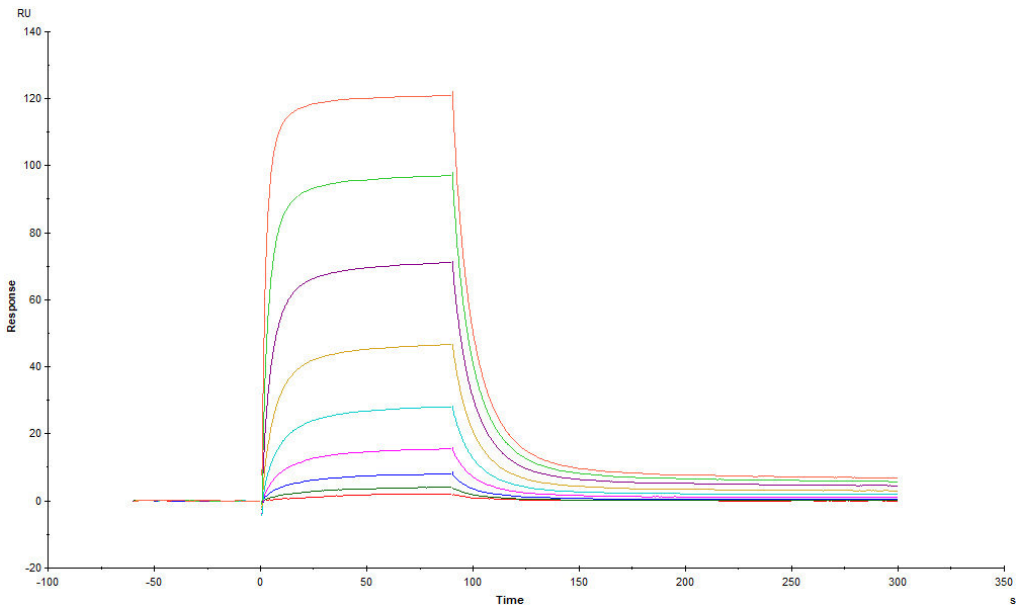
The purity of Biotinylated Mouse CD64, His,Avitag (Cat. No. CD4-M82E7) is more than 90% and the molecular weight of this protein is around 40-55 kDa verified by SEC-MALS.
Report

Bioactivity-ELISA



Immobilized Biotinylated Mouse CD64, His,Avitag (Cat. No. CD4-M82E7) at 1 μg/mL (100 μL/well) on streptavidin (Cat. No. STN-N5116) precoated (0.5 μg/well) plate can bind Monoclonal Anti-Human CD3 Antibody, Mouse IgG2a (Clone: OKT3), premium grade (Cat. No. CDE-M120a) with a linear range of 0.06-4 ng/mL (Routinely tested).

Bioactivity-SPR



Biotinylated Mouse CD64, His,Avitag (Cat. No. CD4-M82E7) captured on Biotin CAP - Series S sensor Chip can bind Herceptin with an affinity constant of 59.8 nM as determined in a SPR assay (Biacore T200) (QC tested).

Background

Receptors that recognize the Fc portion of IgG are divided into three groups designated Fc gamma RI, RII, and RIII, also known respectively as CD64, CD32, and CD16. Fc gamma RI binds IgG with high affinity and functions during early immune responses. Fc gamma RII and RIII are low affinity receptors that recognize IgG as aggregates surrounding multivalent antigens during late immune responses.
High affinity immunoglobulin gamma Fc receptor I is also known as FCGR1A, FCG1, FCGR1, CD64 and IGFR1, is a type of integral membrane glycoprotein that binds monomeric IgG-type antibodies with high affinity, which belongs to the immunoglobulin superfamily or FCGR1 family. FCGR1A / CD64 contains 3 Ig-like C2-type (immunoglobulin-like) domains. CD64 is constitutively found on only macrophages and monocytes, but treatment of polymorphonuclear leukocytes with cytokines like IFNγ and G-CSF can induce CD64 expression on these cells.