

**Synonym**

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

**Source**

Rat CD64 Protein, His Tag(CD4-R52H3) is expressed from human 293 cells (HEK293). It contains AA Gln 16 - Pro 285 (Accession # [A0A0B4J2J0](#)).

Predicted N-terminus: Gln 16

**Molecular Characterization**

CD64(Gln 16 - Pro 285) A0A0B4J2J0	Poly-his
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This protein carries a polyhistidine tag at the C-terminus

The protein has a calculated MW of 32.1 kDa. The protein migrates as 37-45 kDa under reducing (R) condition (SDS-PAGE) due to glycosylation.

**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.*

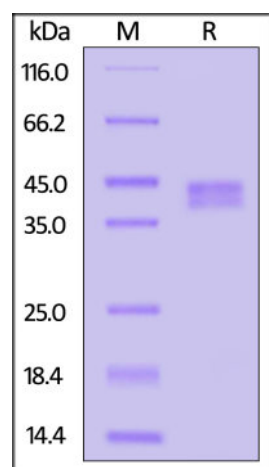
**Storage**

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

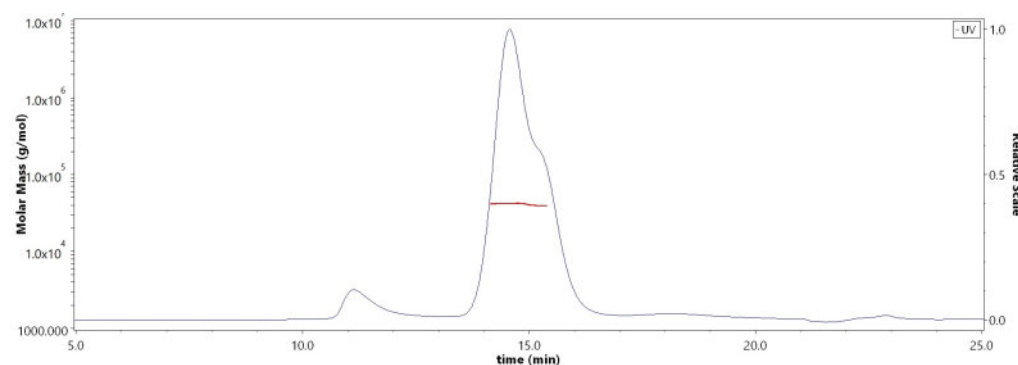
*Please avoid repeated freeze-thaw cycles.*

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.

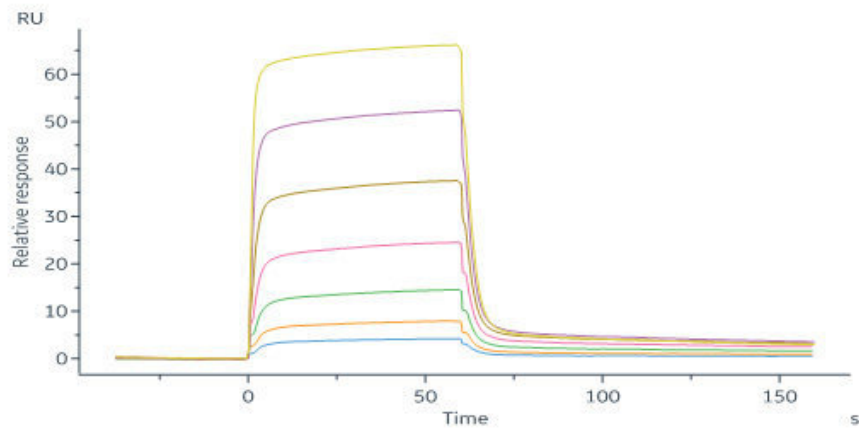
**SDS-PAGE**

Rat CD64 Protein, His Tag on SDS-PAGE under reducing (R) condition. The gel was stained overnight with Coomassie Blue. The purity of the protein is greater than 95%.

**Bioactivity-SPR****SEC-MALS**

The purity of Rat CD64 Protein, His Tag (Cat. No. CD4-R52H3) is more than 90% and the molecular weight of this protein is around 35-45 kDa verified by SEC-MALS.

[Report](#)



GMP Monoclonal Anti-Human CD3 Antibody (OKT3) (Cat. No. GMP-MC0323) immobilized on CM5 Chip can bind Rat CD64 Protein, His Tag (Cat. No. CD4-R52H3) with an affinity constant of 849 nM as determined in a SPR assay (Biacore 8K) (Routinely 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 IFN $\gamma$  and G-CSF can induce CD64 expression on these cells.

### Clinical and Translational Updates

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