



### Synonym

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

### Source

Human CD64, His Tag(FCA-H52H1) is expressed from human 293 cells (HEK293). It contains AA Gln 16 - Leu 281 (Accession # [P12314-1](#)).

Predicted N-terminus: Gln 16

### Molecular Characterization

CD64(Gln 16 - Leu 281)  
P12314-1 Poly-his

This protein carries a polyhistidine tag at the C-terminus.

The protein has a calculated MW of 31.8 kDa. The protein migrates as 45-60 kDa when calibrated against [Star Ribbon Pre-stained Protein Marker](#) under reducing (R) condition (SDS-PAGE) due to glycosylation.

### Endotoxin

Less than 1.0 EU per µg by the LAL method.

### 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

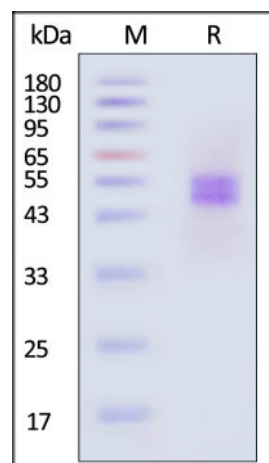
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

*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.

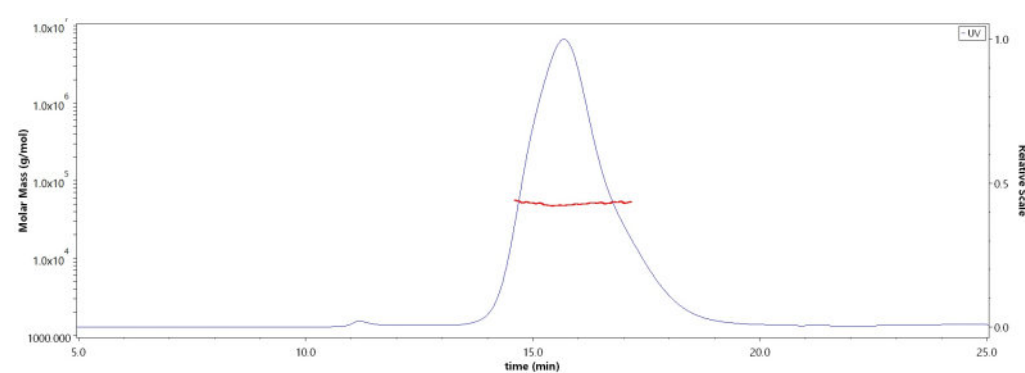
### SDS-PAGE



Human CD64, His Tag on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 90% (With [Star Ribbon Pre-stained Protein Marker](#)).

### Bioactivity-ELISA

### SEC-MALS

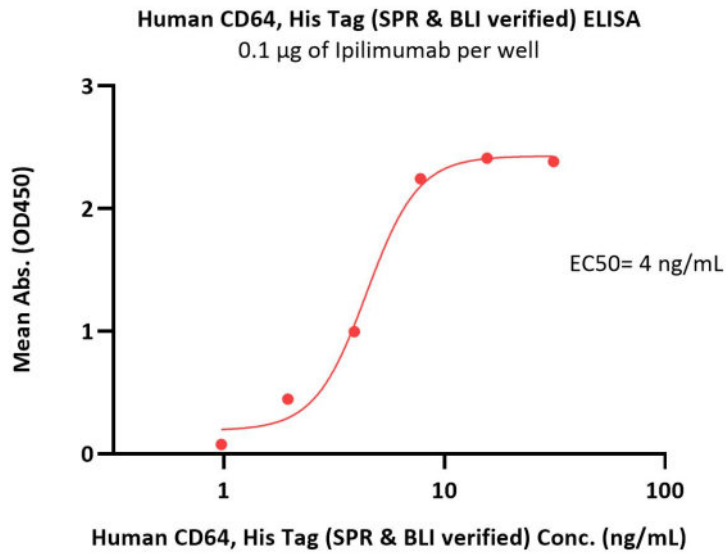


The purity of Human CD64, His Tag (Cat. No. FCA-H52H1) is more than 90% and the molecular weight of this protein is around 40-56 kDa verified by SEC-MALS.

[Report](#)

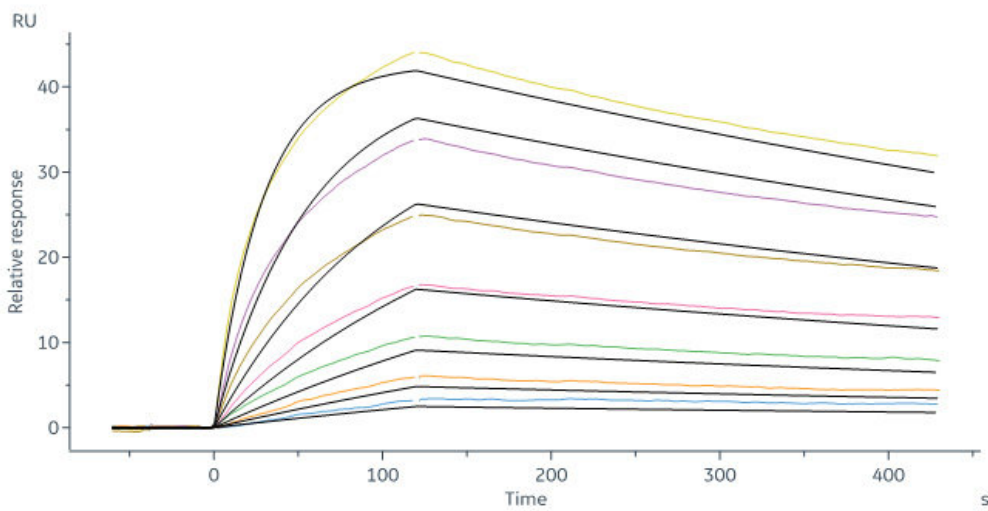
Discounts, Gifts,  
and more!



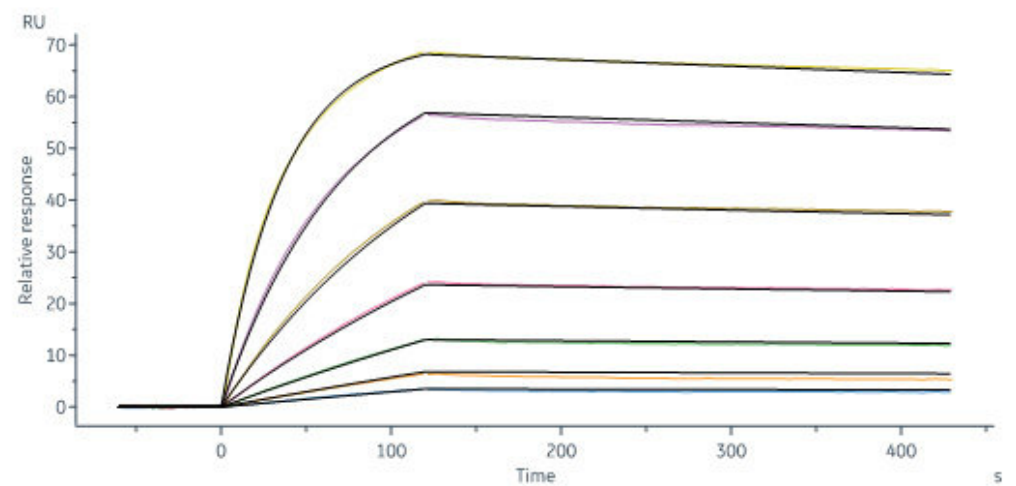


Immobilized Ipilimumab at 1 µg/mL (100 µL/well) can bind Human CD64, His Tag (Cat. No. FCA-H52H1) with a linear range of 2-8 ng/mL (QC tested).

**Bioactivity-SPR**

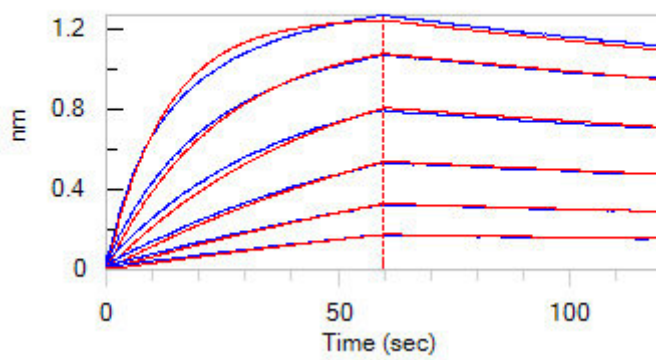


Human CD64, His Tag (Cat. No. FCA-H52H1) captured on CM5 chip via anti-His antibody can bind Herceptin® with an affinity constant of 4.92 nM as determined in a SPR assay (Biacore 8K) (QC tested).

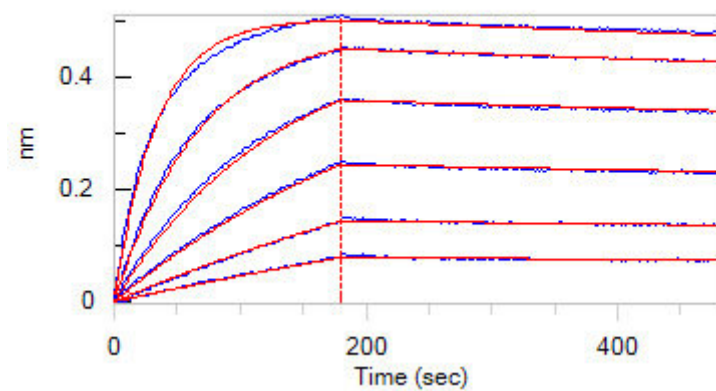


Herceptin captured on Protein A Chip can bind Human CD64, His Tag (Cat. No. FCA-H52H1) with an affinity constant of 0.108 nM as determined in SPR assay (Biacore 8K) (Routinely tested).

**Bioactivity-BLI**



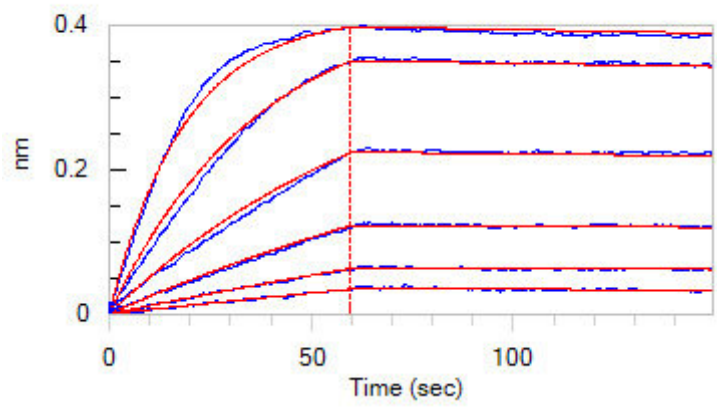
Loaded Human CD64, His Tag (Cat. No. FCA-H52H1) on HIS1K Biosensor, can bind Herceptin with an affinity constant of 6.98 nM as determined in BLI assay (ForteBio Octet Red96e) (Routinely tested).



Loaded Herceptin on Protein A Biosensor, can bind Human CD64, His Tag (Cat. No. FCA-H52H1) with an affinity constant of 0.297 nM as determined in BLI assay (Fort

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Loaded Herceptin on FAB2G Biosensor, can bind Human CD64, His Tag

(Cat. No. FCA-

H52H1) with an affinity constant of 0.244 nM as determined in BLI assay (ForteBio Octet Red96e) (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

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