Recombinant Human Fc gamma RI/FCGR1/CD64 Protein

Catalog No.: RP01226

Sequence Information

Species
Human

Gene ID
2209

Swiss Prot
P12314

Tags
C-His

Synonyms
FCGR1A, CD64, CD64A, FCRI, IGFR1, Fc fragment of IgG receptor Ia,CD64,CD64A,FCRI, IGFR1

Product Information

Source
HEK293 cells

Purification
≥ 95 % as determined by SDS-PAGE;≥ 90 % as determined by HPLC.

Calculated MW
33.23 kDa

Observed MW
45-60 kDa

Endotoxin
< 0.1 EU/μg of the protein by LAL method.

Formulation
Lyophilized from a 0.22 μm filtered solution of PBS, pH 7.4.Contact us for customized product form or formulation.

Reconstitution
Centrifuge the vial before opening. Reconstitute to a concentration of 0.1-0.5 mg/mL in sterile distilled water. Avoid vortex or vigorously pipetting the protein. For long term storage, it is recommended to add a carrier protein or stablizer (e.g. 0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose), and aliquot the reconstituted protein solution to minimize free-thaw cycles.

Background

Receptors for the Fc region of IgG (Fc gamma Rs) are members of the Ig superfamily that function in the activation or inhibition of immune responses such as degranulation, phagocytosis, ADCC (antibody-dependent cellular toxicity), cytokine release, and B cell proliferation . The Fc gamma Rs have been divided into three classes based on close relationships in their extracellular domains; these groups are designated Fc gamma RI (also known as CD64), Fc gamma RII (CD32), and Fc gamma RIII (CD16). Each group may be encoded by multiple genes and exist in different isoforms depending on species and cell type. The CD64 proteins are high affinity receptors capable of binding monomeric IgG, whereas the CD16 and CD32 proteins bind IgG with lower affinities only recognizing IgG aggregates surrounding multivalent antigens . Fc gamma Rs that deliver an activating signal either have an intrinsic immunoreceptor tyrosine-based activation motif (ITAM) within their cytoplasmic domains or associate with one of the ITAM-bearing adapter subunits, Fc R gamma or zeta. The only inhibitory member in human and mouse, Fc gamma RIIb, has an intrinsic cytoplasmic immunoreceptor tyrosine-based inhibitory motif (ITIM). The coordinated functioning of activating and inhibitory receptors is necessary for successful initiation, amplification, and termination of immune responses.
Three highly homologous genes (A, B, and C) sharing 98% identity at the nucleotide level have been identified for the human CD64 group . Fcgamma RI is transmembrane protein with three extracellular Ig-like domains, and it delivers an activating signal via the associated Fc R gamma accessory chain. The genes for Fc gamma RIB and Fc gamma RIC contain stop codons within their membrane proximal Ig-like domains indicating possible secreted receptors .

Basic Information

Description
Recombinant Human Fc gamma RI/FCGR1/CD64 Protein is produced by HEK293 cells expression system. The target protein is expressed with sequence (Met1-Pro288) of human Fc gamma RI/CD64 (Accession #NP_000557.1) fused with a 6×His tag at the C-terminus.

Activity
Measured by its binding ability in a functional ELISA. Immobilized Recombinant Human FCGR1A, His Tag at 2 μg/mL (100 μL/well) can bind Rituximab with a linear range of 15.625-58.38 ng/mL.

Shipping
Lyophilized proteins are shipped at ambient temperature.
Liquid proteins are shipped at frozen temperature with dry ice.
Upon receipt, store it immediately at the temperature recommended below.

Storage
Store at -20℃.Store the lyophilized protein at -20℃ to -80 ℃ up to 1 year from the date of receipt. |After reconstitution, the protein solution is stable at -20℃ for 3 months, at 2-8℃ for up to 1 week.

Contact

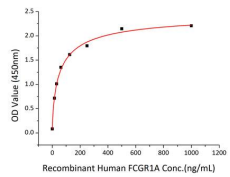
400-999-6126
cn.market@abclonal.com.cn
www.abclonal.com.cn

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Please visit http://abclonal.com for a complete listing of recommended products.

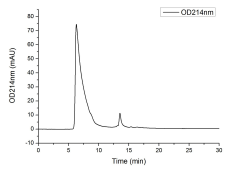
Operational Notes

For your safety and health, please wear a lab coat and disposable gloves for handling.

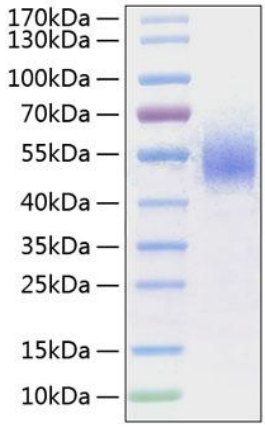
Validation Data



Immobilized Recombinant Human FCGR1A, His Tag at 2μg/mL (100 μL/well) can bind Rituximab with a linear range of 15.625-58.38 ng/mL.



The purity of human Fc gamma RI/CD64 Protein (Cat.RP01226) was greater than 90% as determined by SEC-HPLC.



Recombinant Human Fc gamma RI/FCGR1/CD64 Protein was determined by SDS-PAGE under reducing conditions with Coomassie Blue.