Datasheet for ABIN7536867

FCGR2A Protein (AA 36-218) (His-Avi Tag)

3 Images

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Overview

Quantity:	250 µg
Target:	FCGR2A
Protein Characteristics:	AA 36-218
Origin:	Human
Source:	HEK-293 Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This FCGR2A protein is labelled with His-Avi Tag.
Application:	SDS-PAGE (SDS), Size-exclusion chromatography-High Pressure Liquid Chromatography (SEC-HPLC), Surface Plasmon Resonance (SPR)

Product Details

Purpose:	Human Fc gamma RIIa / CD32a (167R) protein
Sequence:	AAPPKAVLKL EPPWINVLQE DSVTLTCQGA RSPESDSIQW FHNGNLIPTH TQPSYRFKAN NNDSGEYTCQ TGQTSLSDPV HLTVLSEWLV LQTPHLEFQE GETIMLRCHS WKDKPLVKVT FFQNGKSQKF SRLDPTFSIP QANHSHSGDY HCTGNIGYTL FSSKPVTITV QVPSMGSSSP MGIGGGLNDI FEAQKIEWHE GGGENLYFQS GGHHHHHHHH HH
Specificity:	IgG
Characteristics:	The sequence of the extracellular domain of human CD32a (Ala 36-Ile 218) was fused with a C-terminal tag consisting of the AVI tag, TEV protease recognition sequence and a 10-His tag. Allotype: 167R - the low affinity polymorphic variant for CD32a.
Purification:	Nickel and SEC

Product Details

Purity:	> 95 % by SEC-HPLC
Endotoxin Level:	<1.0 EU per mg
Biological Activity Comment:	Measured by its binding affinity in a SPR assay on a Biacore 8k instrument. Human Fc gamma RIIa / CD32a (167R) protein, immobilized on a CM5 chip via an anti-His antibody, can bind to anti-HER2 human IgG1 (trastuzumab) with an affinity constant (KD) of 5.0 μM.

Target Details

Target:	FCGR2A
Alternative Name:	CD32a (FCGR2A Products)
Background:	CD32A, FCGR2A, FCGRIIA, FCR2A, FCRIIA, IGFR2A, IGFRIIA Background: Low affinity immunoglobulin gamma Fc receptor IIa, also known as FcγRIIa or CD32a, is a type I integral membrane glycoprotein. CD32a is a member of the immunoglobulin superfamily and is expressed on macrophages, monocytes, neutrophils, eosinophils and dendritic cells, epithelial cells, platelets and activated CD4+ T cells. CD32a binds monomeric IgG with low affinity but is very efficient at binding immune complexes and is involved in phagocytosis and clearing of immune complexes. CD32a is structurally composed of two extracellular immunoglobulin domains of the C2-type that interact with the IgG Fc domain, a transmembrane domain and a short cytoplasmic tail containing the immunoreceptor tyrosine-based activation (ITAM) motif. The product provided only contains the extracellular portion of CD32a. CD32a has two allotypic variants differing at amino acid position 167, one containing histidine (H167) and the other arginine (R167). H167 exhibits a higher affinity to human IgG1 and IgG2 than the R167 does and is thought to be primarily responsible for the phagocytosis of IgG-opsonized bacteria.
Molecular Weight:	24.8 kDa
UniProt:	P12318

Application Details

Application Notes:	Optimal working dilution should be determined by the investigator.
Restrictions:	For Research Use only

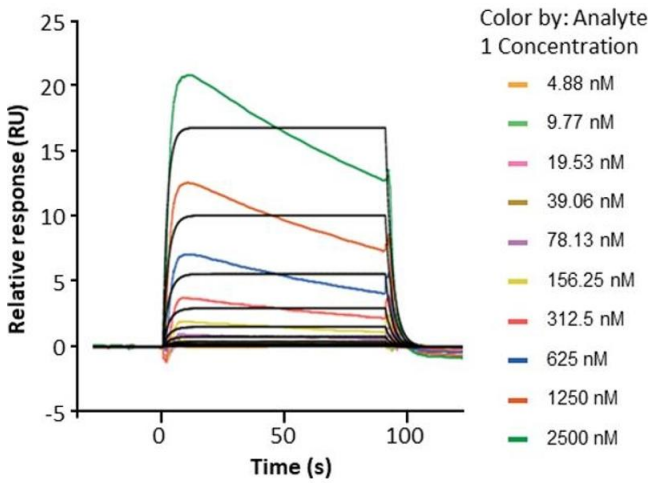
Handling

Format:	Lyophilized

Handling

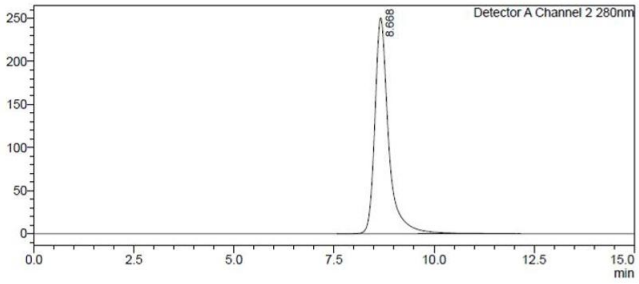
Reconstitution:	To obtain a final concentration of 1 mg/mL reconstitute 250 µg vials with 250 µL water and 1.0 mg vials with 1.0 mL water. Solubilize for 30 to 60 minutes at room temperature with occasional gentle mixing. Do not vortex.
Concentration:	1 mg/mL
Buffer:	PBS pH 7.2-7.4 (140 mM NaCl, 2.7 mM KCl, 10 mM Na2HPO4, 1.8 mM KH2PO4)
Preservative:	Without preservative
Storage:	RT,4 °C,-20 °C,-80 °C
Storage Comment:	Lyophilized proteins are stable at ambient temperature for at least 2 weeks. If the protein is not to be used immediately then the protein should be stored in lyophilized form at -20 °C for up 12 months. Once the protein has been reconstituted we recommend storage at 4 °C for up to one week. For longer term storage of protein in solution we recommend aliquoting into smaller vials to avoid repeated freeze-thaw cycles and storage at -20 or -80 °C for up to 3 months. To avoid surface adsorption loss and inactivation we strongly recommend that the protein should not be aliquoted in less than 10 µg per vial.
Expiry Date:	12 months

Images



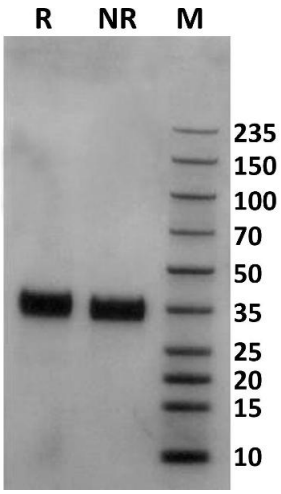
Surface Plasmon Resonance

Image 1. Assessment of binding of human Fc gamma RIIa / CD32a (167R), immobilized on a CM5 chip via an anti-His antibody, to anti-HER2 human IgG1 (trastuzumab) using a Biacore 8K instrument. The protein binds with an affinity constant (KD) of 5.0 µM.



Size-exclusion chromatography-High Pressure Liquid Chromatography

Image 2. Assessment of protein purity for human Fc gamma RIIa / CD32a (167R) protein by SEC-HPLC. The protein is greater than 95 % pure.



SDS-PAGE

Image 3. Human Fc gamma RIIa / CD32a (167R) protein on Coomassie Blue stained SDS-PAGE under non-reducing (NR) and reducing (R) conditions. The purity of the protein is greater than 95 % .