Datasheet for ABIN7536871

FCGR3A Protein (AA 17-208) (His-Avi Tag)

3 Images

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Overview

Quantity:	250 µg
Target:	FCGR3A
Protein Characteristics:	AA 17-208
Origin:	Human
Source:	HEK-293 Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This FCGR3A 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 RIIIa / CD16a (176F) protein
Sequence:	GMRTEDLPKA VVFLEPQWYR VLEKDSVTLK CQGAYSPEDN STQWFHNESL ISSQASSYFI DAATVDDSGE YRCQTNLSTL SDPVQLEVHI GWLLLQAPRW VFKEEDPIHL RCHSWKNTAL HKVTYLQNGK GRKYFHHNSD FYIPKATLKD SGSYFCRGLF GSKNVSSETV NITITQGLAV STISSFFPPG YQGGGLNDIF EAQKIEWHEG GGENLYFQSG GHHHHHHHHH H
Specificity:	IgG
Characteristics:	The sequence of the extracellular domain of human CD16a (Gly 17-Gln 208) was fused with a C-terminal tag consisting of the AVI tag, TEV protease recognition sequence and a 10-His tag. Allotype: 176F - the low affinity polymorphic variant for CD16a.
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 RIIIa / CD16a (176F) protein, directly immobilized on a CM5 chip, can bind to anti-HER2 human IgG1 (trastuzumab) with an affinity constant (KD) of 610 nM.

Target Details

Target:	FCGR3A
Alternative Name:	CD16a (FCGR3A Products)
Background:	CD16A, FCGR3A, FCGRIIIA, FCR3A, FCRIIIA, IGFR3A, IGFRIIIA Background: Low affinity immunoglobulin gamma Fc receptor IIIa, also known as FcγRIIIa or CD16a, is a type I integral membrane glycoprotein. CD16a is a member of the immunoglobulin superfamily and is expressed on macrophages, monocytes and NK cells. CD16a binds monomeric IgG with low affinity but is efficient at binding immune complexes and functions in NK cell activation, phagocytosis and antibody-dependent cellular cytotoxicity (ADCC). CD16a 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. CD16a is associated with a dimer of the common Fc receptor gamma-chain which contains the immunoreceptor tyrosine-based activation (ITAM) motif. The product provided only contains the extracellular portion of CD16a. CD16a has two allotypic variants differing at amino acid position 176, one containing phenylalanine (F176) and the other valine (V176). The V176 variant has a greater affinity for all the IgG subclasses and thus results in greater effector function.
Molecular Weight:	26.3 kDa
UniProt:	P08637

Application Details

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

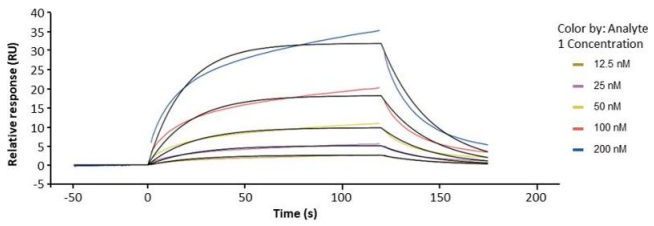
Handling

Format:	Lyophilized
Reconstitution:	To obtain a final concentration of 1 mg/mL reconstitute 250 µg vials with 250 µL water and

Handling

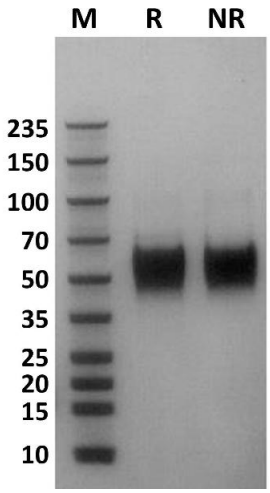
	1.0 mg vials with 1.0 mL water. Solubilize for 30 to 60 minutes at room temperature with occasional gentle mixing. Do not vortex.
Concentration:	1 mg/mL
Buffer:	PBS pH 7.2-7.4 (140 mM NaCl, 2.7 mM KCl, 10 mM Na2HPO4, 1.8 mM KH2PO4)
Preservative:	Without preservative
Storage:	RT,4 °C,-20 °C,-80 °C
Storage 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



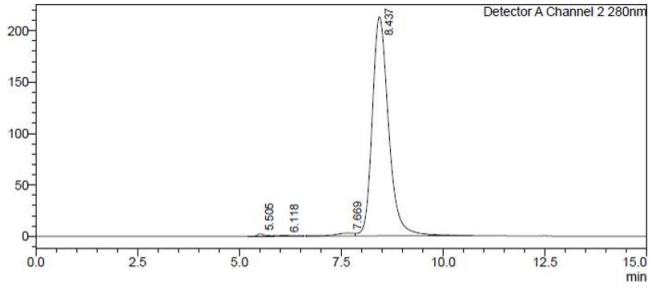
Surface Plasmon Resonance

Image 1. Assessment of binding of human Fc gamma RIIIa / CD16a (176F), immobilized on a CM5 chip, to anti-HER2 human IgG1 (trastuzumab) using a Biacore 8K instrument. The protein binds with an affinity constant (KD) of 610 nM.



SDS-PAGE

Image 2. Human Fc gamma RIIIa / CD16a (176F) protein on Coomassie Blue stained SDS-PAGE under non-reducing (NR) and reducing (R) conditions. The purity of the protein is greater than 95 % .



Size-exclusion chromatography-High Pressure Liquid Chromatography

Image 3. Assessment of protein purity for human Fc gamma RIIIa / CD16a (176F) protein by SEC-HPLC. The protein is greater than 95 % pure.