Datasheet for ABIN7536880

FcRn Protein (AA 24-297) (His-Avi Tag,Biotin)

3 Images

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Overview

Quantity:	250 µg
Target:	FcRn
Protein Characteristics:	AA 24-297
Origin:	Human
Source:	HEK-293 Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This FcRn protein is labelled with His-Avi Tag,Biotin.
Application:	SDS-PAGE (SDS), Size-exclusion chromatography-High Pressure Liquid Chromatography (SEC-HPLC), Surface Plasmon Resonance (SPR)

Product Details

Purpose:	Biotinylated human FcRn (FCGRT-B2M) heterodimer protein
Sequence:	AESHLSLLYH LTAVSSPAPG TPAFWVSGWL GPQQYLSYNS LRGEAEPCGA WVWENQVSWY WEKETTDLRI KEKLFLEAFK ALGGKGPYTL QGLLGCELGP DNTSVPTAKF ALNGEEFMNF DLKQGTWGGD WPEALAISQR WQQQDKAANK ELTFLLFSCP HRLREHLERG RGNLEWKEPP SMRLKARPSS PGFSVLTCSA FSFYPPELQL RFLRNGLAAG TGQGDFGPNS DGSFHASSSL TVKSGDEHHY CCIVQHAGLA QPLRVELESP AKSSGGGLND IFEAQKIEWH EGGGENLYFQ SGGHHHHHHH HHH and IQRTPKIQVY SRHPAENGKS NFLNCYVSGF HPSDIEVDLL KNGERIEKVE HSDLSFSKDW SFYLLYYTEF TPTEKDEYAC RVNHVTLSQP KIVKWDRDM
Specificity:	IgG and albumin
Characteristics:	The sequence of the extracellular domain of human FCGRT (Ala 24-Ser 297) was fused with a

Product Details

	C-terminal tag consisting of the AVI tag, TEV protease recognition sequence and a 10-His tag. This was co-transfected with the sequence of human B2M (Ile 21-Met 119) and the resulting FcRn heterodimer was purified.
Purification:	Nickel and SEC
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 FcRn 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 147 nM.

Target Details

Target:	FcRn
Alternative Name:	FcRn (FcRn Products)
Background:	FcRn, FCGRT & B2M Background: Neonatal Fc receptor,IgG Fc fragment receptor transporter, also known as the neonatal Fc receptor or more commonly FcRn, consist of two subunits (FCGRT and B2M) and forms an MHC class I-like heterodimer. FcRn binds to the Fc domain of monomeric IgG and mediates the pH dependent recycling of IgG as well as its uptake from milk and transfer from mother to fetus.
Molecular Weight:	46.6 kDa
UniProt:	P55899, P61769
Pathways:	Regulation of Leukocyte Mediated Immunity, Positive Regulation of Immune Effector Process

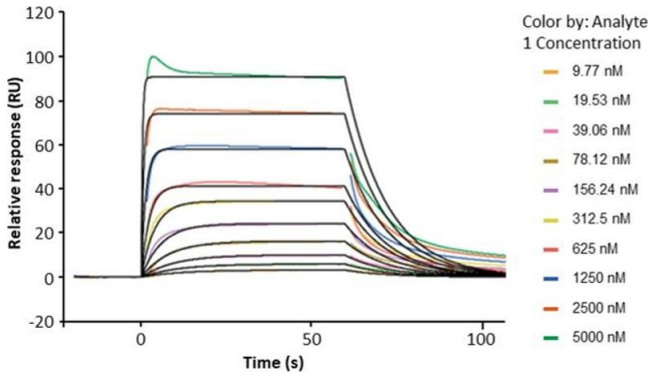
Application Details

Application Notes:	Optimal working dilution should be determined by the investigator.
Comment:	Biotin to protein ratio is confirmed as 0.7-1.0 by the HABA assay. Product has been site-specifically biotinylated using the AVI tag technology, where the lysine residue within the tag is enzymatically labeled with biotin.
Restrictions:	For Research Use only

Handling

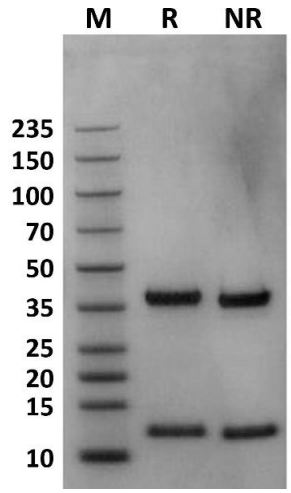
Format:	Lyophilized
Reconstitution:	To obtain a final concentration of 1 mg/mL reconstitute 250 µg vials with 250 µL water and 1.0 mg vials with 1.0 mL water. Solubilize for 30 to 60 minutes at room temperature with occasional gentle mixing. Do not vortex.
Concentration:	1 mg/mL
Buffer:	PBS pH 7.2-7.4 (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



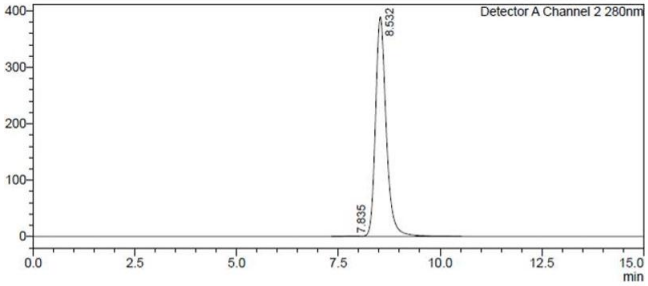
Surface Plasmon Resonance

Image 1. Assessment of binding of human FcRn, 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 147 nM.



SDS-PAGE

Image 2. Human FcRn on Coomassie Blue stained SDS-PAGE under non-reducing (NR) and reducing (R) conditions. The upper band is the FCGRT 'heavy' chain and the lower band is the B2M 'light' chain. The purity of the protein is greater than 95 % .



Size-exclusion chromatography-High Pressure Liquid Chromatography

Image 3. Assessment of protein purity for human FcRn (FCGRT-B2M) heterodimer protein by SEC-HPLC. The protein is greater than 95 % pure.