

Datasheet for ABIN7536863
FCGR1A Protein (AA 16-281) (His-Avi Tag)



[Go to Product page](#)

3 Images

Overview

| | |
|-------------------------------|---|
| Quantity: | 1 mg |
| Target: | FCGR1A |
| Protein Characteristics: | AA 16-281 |
| Origin: | Human |
| Source: | HEK-293 Cells |
| Protein Type: | Recombinant |
| Purification tag / Conjugate: | This FCGR1A 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

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| Purpose: | Human Fc gamma RI / CD64 protein |
| Sequence: | QVDTTKAVIT LQPPWVSVFQ EETVTLHCEV LHLPGSSSTQ WFLNGTATQT STPSYRITSA SVNDSGEYRC QRGLSGRSDP IQLEIHRGWL LLQVSSRVFT EGEPLALRCH AWKDKLVYNNV LYYRNGKAFK FFHWNSNLTI LKTNISHNGT YHCSGMGKHR YTSAGISVTV KELFPAPVLN ASVTSPLEGG NLVTLSCETK LLLQRPGQL YFSFYMGSKT LRGRNTSSEY QILTARREDS GLYWCEAATE DGNVLKRSPE LELQVLGGGL NDIFEAQKIE WHEGGGENLY FQSGGHHHHHH HHHHH |
| Specificity: | IgG |
| Characteristics: | The sequence of the extracellular domain of human CD64 (Gln 16-Leu 281) was fused with a C-terminal tag consisting of the AVI tag, TEV protease recognition sequence and a 10-His tag. |

Product Details

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| 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 Fc gamma RI / CD64 protein can bind to anti-HER2 human IgG1 (trastuzumab) immobilized on a Protein A chip with an affinity constant (KD) of 0.1 nM. |

Target Details

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|-------------------|--|
| Target: | FCGR1A |
| Alternative Name: | CD64 (FCGR1A Products) |
| Background: | <p>CD64, CD64A, FCGR1, FCGR1A, FCGR1A, FCR1, FCRI, IGFR1</p> <p>Background: IGFRI, High affinity immunoglobulin gamma Fc receptor I, also known as FcγRI or CD64, is a type I integral membrane glycoprotein. CD64 is a member of the immunoglobulin superfamily and is expressed on monocytes, macrophages, dendritic cells and activated granulocytes. CD64 binds with high affinity to the Fc domain of IgG and it plays a role in antigen capture, phagocytosis of IgG/antigen complexes, and antibody-dependent cellular cytotoxicity (ADCC). CD64 is structurally composed of three extracellular immunoglobulin domains of the C2-type that interact with the IgG Fc domain, a transmembrane domain and a short cytoplasmic tail. CD64 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 CD64.</p> |
| Molecular Weight: | 34.4 kDa |
| UniProt: | P12314 |
| Pathways: | Regulation of Leukocyte Mediated Immunity , Positive Regulation of Immune Effector Process |

Application Details

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

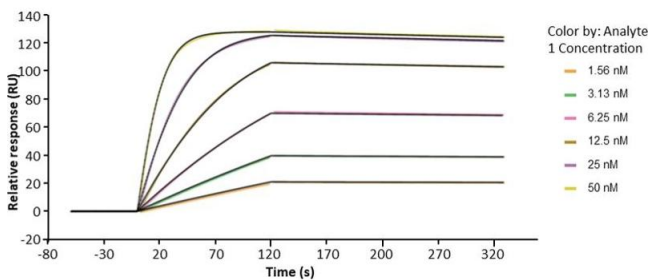
Handling

| | |
|---------|-------------|
| Format: | Lyophilized |
|---------|-------------|

Handling

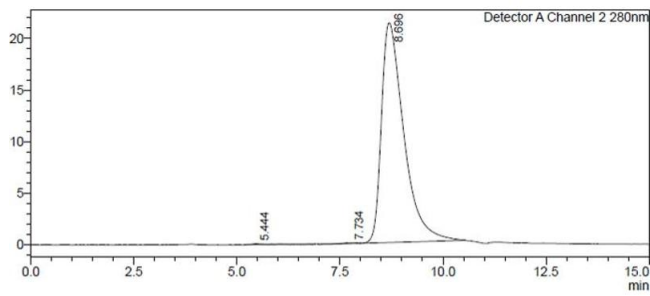
| | |
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| Reconstitution: | To obtain a final concentration of 1 mg/mL reconstitute 250 µg vials with 250 µL water and 1.0 mg vials with 1.0 mL water. Solubilize for 30 to 60 minutes at room temperature with occasional gentle mixing. Do not vortex. |
| Concentration: | 1 mg/mL |
| Buffer: | PBS pH 7.2-7.4 (140 mM NaCl, 2.7 mM KCl, 10 mM Na ₂ HPO ₄ , 1.8 mM KH ₂ PO ₄) |
| 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 to 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



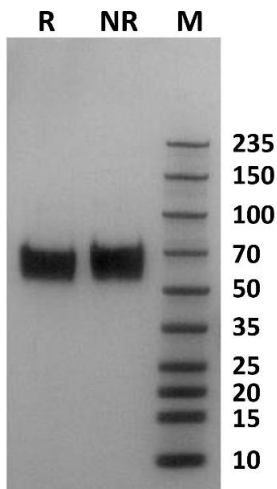
Surface Plasmon Resonance

Image 1. Assessment of binding of anti-HER2 human IgG1 (trastuzumab), immobilized on a Protein A chip to human Fc gamma RI / CD64 using a Biacore 8K instrument. The protein binds with an affinity constant (KD) of 0.1 nM.



Size-exclusion chromatography-High Pressure Liquid Chromatography

Image 2. Assessment of protein purity for human Fc gamma RI / CD64 protein by SEC-HPLC. The protein is greater than 95 % pure.



SDS-PAGE

Image 3. Human Fc gamma RI / CD64 protein on Coomassie Blue stained SDS-PAGE under non-reducing (NR) and reducing (R) conditions. The purity of the protein is greater than 95 % .