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Datasheet for ABIN3093146
CD51 Protein (AA 31-992) (His tag)

Overview

Quantity:	1 mg
Target:	CD51 (ITGAV)
Protein Characteristics:	AA 31-992
Origin:	Human
Source:	Insect Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This CD51 protein is labelled with His tag.
Application:	SDS-PAGE (SDS), Western Blotting (WB), ELISA, Crystallization (Crys)

Product Details

Sequence: FNLDVDSPAE YSGPEGSYFG FAVDFFVPSA SSRMFLLVGA PKANTTQPGI VEGGQVLKCD
WSSTRRCQPI EFDATGNRDY AKDDPLEFKS HQWFGASVRS KQDKILACAP LYHWRTEMKQ
EREVPGTCFL QDGTKTVEYA PCRSQDIDAD GQGFCQGGFS IDFTKADRVL LGGPGSFYWQ
GQLISDQVAE IVSKYDPNVY SIKYNNQLAT RTAQAIFFDS YLGYSVAVGD FNGDGIDDFV
SGVPRAARTL GMVYIYDGKN MSSLYNFTGE QMAAYFGFSV AATDINGDDY ADVFIGAPLF
MDRGSQGLKQ EVGQVSVSLQ RASGDFQTTK LNGFEVFARF GSAIAPLGLD QDQGFNDIAI
AAPYGGEDKK GIVYIFNGRS TGLNAVPSQI LEGQWAARSM PPSFGYSMKG ATDIDKNGYP
DLIVGAFGVD RAILYRARPV ITVNAGLEVY PSILNQDNKT CSLPGTALKV SCFNVRFLCK
ADGKGVLPK LNFQVELLLD KLKQKGAIRR ALFLYSRSPS HSKNMTISRG GLMQCEELIA
YLRDESEFRD KLTPITIFME YRLDYRTAAD TTGLQPILNQ FTPANISRQA HILLDCGEDN
VCKPKLEVS V DSDQKKIYIG DDNPLTLIVK AQNQEGEGAYE AELIVSIPLQ ADFIGVVRNN
EALARLSCAF KTENQTRQVV CDLGNPMKAG TQLLAGLRFS VHQQSEMDTS VKFDLQIQSS

NLFDKVSPVW SHKVDLAVLA AVEIRGVSSP DHVFLPIPWN EHKENPETEE DVGPPVQHIY
ELRNNGPSSF SKAMLHLQWP YKYNNTLLY ILHYDIDGPM NCTSDMEINP LRIKISSLQT
TEKNDTVAGQ GERDHLITKR DLALSEGDIH TLGCGVAQCL KIVCQVGRLD RGKSAILYVK
SLLWTETFMN KENQNHSYSL KSSASFNVIE FPYKNLPIED ITNSTLVTTN VTWGIQPAPM PV

Sequence without tag. Tag location is at the discretion of the manufacturer. If you have a special request, please contact us.

Characteristics:

- Made in Germany - from design to production - by highly experienced protein experts.
- Human ITGAV Protein (raised in Insect Cells) purified by multi-step, protein-specific process to ensure crystallization grade.
- State-of-the-art algorithm used for plasmid design (Gene synthesis).

This protein is a made to order protein and will be made for the first time for your order. Our experts in the lab will ensure that you receive a correctly folded protein.

The big advantage of ordering our made-to-order proteins in comparison to ordering custom made proteins from other companies is that there is no financial obligation in case the protein cannot be expressed or purified.

In the unlikely event that the protein cannot be expressed or purified we do not charge anything (other companies might charge you for any performed steps in the expression process for custom-made proteins, e.g. fees might apply for the expression plasmid, the first expression experiments or purification optimization).

When you order this made-to-order protein you will only pay upon receipt of the correctly folded protein. With no financial risk on your end you can rest assured that our experienced protein experts will do everything to make sure that you receive the protein you ordered.

The concentration of our recombinant proteins is measured using the absorbance at 280nm. The protein's absorbance will be measured in several dilutions and is measured against its specific reference buffer.

The concentration of the protein is calculated using its specific absorption coefficient. We use the Expasy's protparam tool to determine the absorption coefficient of each protein.

Purification:

Two step purification of proteins expressed in baculovirus infected SF9 insect cells:

1. In a first purification step, the protein is purified from the cleared cell lysate using three different His-tag capture materials: high yield, EDTA resistant, or DTT resistant. Eluate fractions are analyzed by SDS-PAGE.
2. Protein containing fractions of the best purification are subjected to second purification step through size exclusion chromatography. Eluate fractions are analyzed by SDS-PAGE and Western blot.

Purity:

>95 % as determined by SDS PAGE, Size Exclusion Chromatography and Western Blot.

Product Details

Sterility:	0.22 µm filtered
Endotoxin Level:	Protein is endotoxin free.
Grade:	Crystallography grade

Target Details

Target:	CD51 (ITGAV)
Alternative Name:	ITGAV (ITGAV Products)

Background: The alpha-V (ITGAV) integrins are receptors for vitronectin, cytotactin, fibronectin, fibrinogen, laminin, matrix metalloproteinase-2, osteopontin, osteomodulin, prothrombin, thrombospondin and vWF. They recognize the sequence R-G-D in a wide array of ligands. ITGAV:ITGB3 binds to fractalkine (CX3CL1) and may act as its coreceptor in CX3CR1-dependent fractalkine signaling (PubMed:23125415). ITGAV:ITGB3 binds to NRG1 (via EGF domain) and this binding is essential for NRG1-ERBB signaling (PubMed:20682778). ITGAV:ITGB3 binds to FGF1 and this binding is essential for FGF1 signaling (PubMed:18441324). ITGAV:ITGB3 binds to IGF1 and this binding is essential for IGF1 signaling (PubMed:19578119). {ECO:0000269|PubMed:18441324, ECO:0000269|PubMed:19578119, ECO:0000269|PubMed:20682778, ECO:0000269|PubMed:23125415}. (Microbial infection) Integrin ITGAV:ITGB5 acts as a receptor for adenovirus type C (PubMed:20615244). Integrin ITGAV:ITGB5 and ITGAV:ITGB3 act as receptors for coxsackievirus A9 and B1 (PubMed:9426447, PubMed:15194773, PubMed:7519807). Integrin ITGAV:ITGB3 acts as a receptor for herpes virus 8/HHV-8 (PubMed:18045938). Integrin ITGAV:ITGB6 acts as a receptor for herpes simplex 1/HHV-1 (PubMed:24367260). Integrin ITGAV:ITGB3 acts as a receptor for Human parechovirus 1 (PubMed:11160695). Integrin ITGAV:ITGB3 acts as a receptor for West nile virus (PubMed:23658209). In case of HIV-1 infection, the interaction with extracellular viral Tat protein seems to enhance angiogenesis in Kaposi's sarcoma lesions (PubMed:10397733). {ECO:0000269|PubMed:10397733, ECO:0000269|PubMed:11160695, ECO:0000269|PubMed:15194773, ECO:0000269|PubMed:18045938, ECO:0000269|PubMed:20615244, ECO:0000269|PubMed:23658209, ECO:0000269|PubMed:24367260, ECO:0000269|PubMed:7519807, ECO:0000269|PubMed:9426447}.

Molecular Weight: 107.2 kDa Including tag.

UniProt: [P06756](#)

Pathways: [Cell-Cell Junction Organization, Signaling Events mediated by VEGFR1 and VEGFR2, Growth](#)

Target Details

Factor Binding, Integrin Complex

Application Details

Application Notes: In addition to the applications listed above we expect the protein to work for functional studies as well. As the protein has not been tested for functional studies yet we cannot offer a guarantee though.

Comment: In cases in which it is highly likely that the recombinant protein with the default tag will be insoluble our protein lab may suggest a higher molecular weight tag (e.g. GST-tag) instead to increase solubility. We will discuss all possible options with you in detail to assure that you receive your protein of interest.

Restrictions: For Research Use only

Handling

Format: Liquid

Buffer: 100 mM NaCl, 20 mM Hepes, 10% glycerol. pH value is at the discretion of the manufacturer.

Handling Advice: Avoid repeated freeze-thaw cycles.

Storage: -80 °C

Storage Comment: Store at -80°C.

Expiry Date: Unlimited (if stored properly)