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Datasheet for ABIN3112034  
**CD51 Protein (AA 891-1048) (rho-1D4 tag)**

### Overview

Quantity:	1 mg
Target:	CD51 (ITGAV)
Protein Characteristics:	AA 891-1048
Origin:	Human
Source:	Insect Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This CD51 protein is labelled with rho-1D4 tag.
Application:	SDS-PAGE (SDS), Western Blotting (WB), ELISA, Crystallization (Crys)

### Product Details

Sequence:	DLALSEGDIH TLGCGVAQCL KIVCQVGRLD RGKSAILYVK SLLWTETFMN KENQNHYSYL KSSASFNVIE FPYKNLPIED ITNSTLVTTN VTWGIQPAPM PVPVWVILA VLAGLLLLAV LVFVMYRMGF FKRVRPPQEE QEREQLQPHE NGENSET <b>Sequence without tag. Tag location is at the discretion of the manufacturer. If you have a special request, please contact us.</b>
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Characteristics:	<ul style="list-style-type: none"><li>• Made in Germany - from design to production - by highly experienced protein experts.</li><li>• Human ITGAV Protein (raised in Insect Cells) purified by multi-step, protein-specific process to ensure crystallization grade.</li><li>• State-of-the-art algorithm used for plasmid design (Gene synthesis).</li></ul>
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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

## Product Details

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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.

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Purification:	Three step purification of membrane proteins expressed in baculovirus infected SF9 insect cells: <ol style="list-style-type: none"><li>1. Membrane proteins are fractionated by ultracentrifugation and subsequently solubilized with different detergents (detergent screen). Samples are analyzed by Western blot.</li><li>2. The best performing detergent is used for solubilization and the proteins are purified via their rho1D4 tag via two rho1D4 antibody columns: one DTT resistant, the other one not. Eluate fractions are analyzed by Western blot.</li><li>3. Protein containing fractions of the best purification are subjected to second purification step through size exclusion chromatograph. Eluate fractions are analyzed by SDS-PAGE and Western blot.</li></ol>
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Purity:	>95 % as determined by SDS PAGE, Size Exclusion Chromatography and Western Blot.
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Sterility:	0.22 µm filtered
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Endotoxin Level:	Protein is endotoxin-free.
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Grade:	Crystallography grade
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## Target Details

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Target:	CD51 (ITGAV)
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Alternative Name:	ITGAV ( <a href="#">ITGAV Products</a> )
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Background:	The alpha-V (ITGAV) integrins are receptors for vitronectin, cytotactin, fibronectin, fibrinogen, laminin, matrix metalloproteinase-2, osteopontin, osteomodulin, prothrombin, thrombospondin
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## Target Details

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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}.

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Molecular Weight: 18.9 kDa Including tag.

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UniProt: [P06756](#)

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

## Application Details

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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.

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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.

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## Application Details

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Restrictions: For Research Use only

## Handling

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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)