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Datasheet for ABIN3093285

## ITGA4 Protein (AA 35-977) (His tag)

### 1 Image

#### Overview

Quantity:	1 mg
Target:	ITGA4
Protein Characteristics:	AA 35-977
Origin:	Human
Source:	Insect Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This ITGA4 protein is labelled with His tag.
Application:	Western Blotting (WB), SDS-PAGE (SDS), ELISA, Crystallization (Crys)

#### Product Details

Sequence: NVDTESALLY QGPHNTLFGY SVVLHSHGAN RWLLVGAPTA NWLANASVIN PGAIYRCRIG  
KNPGQTCEQL QLGSPNGEPC GKTCLEERDN QWLGVTLSRQ PGENGSIIVTC GHRWKNIFYI  
KNENKLPTGG CYGVPPDLRT ELSKRIAPCY QDYVKKFGEN FASCQAGISS FYTKDLIVMG  
APGSSYWTGS LRVYNITTNK YKAFLDKQNN VKFGSYLGYV VGAGHFRSQH TTEVVGAPQ  
HEQIGKAYIF SIDEKELNIL HEMKGKGLGS YFGASVCAVD LNADGFSDLL VGAPMQSTIR  
EEGRVFVYIN SGSGAVMNAM ETNLVGSDDY AARFGESIVN LGDIDNDGFE DVAIGAPQED  
DLQGAIIYIN GRADGISSTF SQRIEGLQIS KSLSMFGQSI SGQIDADNNG YVDVAVGAFR  
SDSAVLLRTR PVVIVDASLS HPESVNRKTF DCVENGWPSV CIDLTLCSY KGKEVPGYIV  
LFYNMSLDVN RKAESPFRFY FSSNGTSDVI TGSIQVSSRE ANCRTHQAFM RKDVRDILTP  
IQIEAAYHLG PHVISKRSTE EFPPLQPIQ QKKEKDIMKK TINFARFAH ENCSADLQVS  
AKIGFLKPHE NKTYLAVGSM KTLMLNVSLF NAGDDAYETT LHVKLPVGLY FIKILELEEK  
QINCEVTDNS GVVQLDCSIG YIYVDHLSRI DISFLLDVSS LSRAEEDLSI TVHATCENEE

EMDNLKHSRV TVAIPLKYEY KLTVHGFVNP TSFVYGSNDE NEPETCMVEK MNLTFHVINT  
GNSMAPNVS EIMVPNSFSP QTDKLFNILD VQTTTGECHF ENYQRVCALE QQKSAMQTLK  
GIVRFLSKTD KRLLYCIKAD PHCLNFLCNF GKMEGKEAS VHIQLEGRPS ILEMDETSAL  
KFEIRATGFP EPNPRVIELN KDENVAHVLL EGLHHQRPKR YFT

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

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### Characteristics:

- Made in Germany - from design to production - by highly experienced protein experts.
- Human ITGA4 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.

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### 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.

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### Purity:

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

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## Product Details

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

## Target Details

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Target:	ITGA4
Alternative Name:	ITGA4 ( <a href="#">ITGA4 Products</a> )
Background:	<p>Integrins alpha-4/beta-1 (VLA-4) and alpha-4/beta-7 are receptors for fibronectin. They recognize one or more domains within the alternatively spliced CS-1 and CS-5 regions of fibronectin. They are also receptors for VCAM1. Integrin alpha-4/beta-1 recognizes the sequence Q-I-D-S in VCAM1. Integrin alpha-4/beta-7 is also a receptor for MADCAM1. It recognizes the sequence L-D-T in MADCAM1. On activated endothelial cells integrin VLA-4 triggers homotypic aggregation for most VLA-4-positive leukocyte cell lines. It may also participate in cytolytic T-cell interactions with target cells. ITGA4:ITGB1 binds to fractalkine (CX3CL1) and may act as its coreceptor in CX3CR1-dependent fractalkine signaling (PubMed:23125415). {ECO:0000269 PubMed:19064666, ECO:0000269 PubMed:23125415}.</p>
Molecular Weight:	105.6 kDa Including tag.
UniProt:	<a href="#">P13612</a>
Pathways:	<a href="#">Integrin Complex</a>

## 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.
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

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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)

## Images

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**Image 1.** „Crystallography Grade“ protein due to multi-step, protein-specific purification process