

Datasheet for ABIN3111970
ITGB1 Protein (AA 21-798) (rho-1D4 tag)[Go to Product page](#)

1 Image

Overview

Quantity:	1 mg
Target:	ITGB1
Protein Characteristics:	AA 21-798
Origin:	Human
Source:	Insect Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This ITGB1 protein is labelled with rho-1D4 tag.
Application:	SDS-PAGE (SDS), Western Blotting (WB), ELISA, Crystallization (Crys)

Product Details

Sequence:	QTDENRCLKA NAKSCGECIQ AGPNCGWCTN STFLQEGMPT SARCDLEAL KKKGCPPDDI ENPRGSKDIK KNKNVTNRSK GTAELKLPED ITQIQPQLV LRLRSGEPQT FTLKFKRAED YPIDLYYLM DLSYSMKDDLE NVKSLGTDLM NEMRRITSDF RIGFGSFVEK TVMPYISTTP AKLRNPCTSE QNCTSPFSYK NVLSLTNKGE VFNELVGKQR ISGNLDSPEG GFDAIMQVAV CGSLIGWRNV TRLLVFSTDA GFHFAGDGKL GGIVLPNDGQ CHLENNMYTM SHYYDYPSIA HLVQKLENN IQTIFAVTEE FQPVYKELKN LIPKSAVGT L SANSSNVIQL IIDAYNSLSS EVILENGKLS EGV TISYKSY CKNGVNGTGE NGRKCSNISI GDEVQFEISI TSNKCPKKDS DSFKIRPLGF TEEVEVILQY ICECECQSEG IPESPKCHEG NGTFECGACR CNEGRVGRHC ECSTDEVNSE DMDAYCRKEN SSEICSNNGE CVCQCVCVRK RDNTNEIYSG KFCECDNFNC DRSNGLICGG NGVCKCRVCE CNPNYTGSA C DCSLDTSTCE ASNGQICNGR GICECGVCKC TDPKFQGQTC EMCQTCLGVC AEHKECVQCR AFNKGEKKDT CTQEC SYFNI TKVESRDKLP QPVQPDVSH CKEKDVDDCW FYFTYSVNGN NEVMVHVVEN PECPTGPDII PIVAGVVAGI
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VLIGLALLLI WKLLMIHHR REFAKFEKEK MNAKWDTGEN PIYKSAVTTV VNPKEYGK

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 ITGB1 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:

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

1. Membrane proteins are fractionated by ultracentrifugation and subsequently solubilized with different detergents (detergent screen). Samples are analyzed by Western blot.
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.
3. 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.

Sterility:

0.22 µm filtered

Product Details

Endotoxin Level: Protein is endotoxin-free.

Grade: Crystallography grade

Target Details

Target: ITGB1

Alternative Name: ITGB1 ([ITGB1 Products](#))

Background: Integrins alpha-1/beta-1, alpha-2/beta-1, alpha-10/beta-1 and alpha-11/beta-1 are receptors for collagen. Integrins alpha-1/beta-1 and alpha-2/beta-2 recognize the proline-hydroxylated sequence G-F-P-G-E-R in collagen. Integrins alpha-2/beta-1, alpha-3/beta-1, alpha-4/beta-1, alpha-5/beta-1, alpha-8/beta-1, alpha-10/beta-1, alpha-11/beta-1 and alpha-V/beta-1 are receptors for fibronectin. Alpha-4/beta-1 recognizes one or more domains within the alternatively spliced CS-1 and CS-5 regions of fibronectin. Integrin alpha-5/beta-1 is a receptor for fibrinogen. Integrin alpha-1/beta-1, alpha-2/beta-1, alpha-6/beta-1 and alpha-7/beta-1 are receptors for laminin. Integrin alpha-4/beta-1 is a receptor for VCAM1. It recognizes the sequence Q-I-D-S in VCAM1. Integrin alpha-9/beta-1 is a receptor for VCAM1, cytotactin and osteopontin. It recognizes the sequence A-E-I-D-G-I-E-L in cytotactin. Integrin alpha-3/beta-1 is a receptor for epiligrin, thrombospondin and CSPG4. Alpha-3/beta-1 may mediate with LGALS3 the stimulation by CSPG4 of endothelial cells migration. Integrin alpha-V/beta-1 is a receptor for vitronectin. Beta-1 integrins recognize the sequence R-G-D in a wide array of ligands. Isoform 2 interferes with isoform 1 resulting in a dominant negative effect on cell adhesion and migration (in vitro). When associated with alpha-7/beta-1 integrin, regulates cell adhesion and laminin matrix deposition. Involved in promoting endothelial cell motility and angiogenesis. Involved in osteoblast compaction through the fibronectin fibrillogenesis cell-mediated matrix assembly process and the formation of mineralized bone nodules. May be involved in up-regulation of the activity of kinases such as PKC via binding to KRT1. Together with KRT1 and RACK1, serves as a platform for SRC activation or inactivation. Plays a mechanistic adhesive role during telophase, required for the successful completion of cytokinesis. Integrin alpha-3/beta-1 provides a docking site for FAP (seprase) at invadopodia plasma membranes in a collagen-dependent manner and hence may participate in the adhesion, formation of invadopodia and matrix degradation processes, promoting cell invasion. ITGA4:ITGB1 binds to fractalkine (CX3CL1) and may act as its coreceptor in CX3CR1-dependent fractalkine signaling (PubMed:23125415, PubMed:24789099). {ECO:0000269|PubMed:10455171, ECO:0000269|PubMed:12473654, ECO:0000269|PubMed:16256741, ECO:0000269|PubMed:18804435, ECO:0000269|PubMed:19064666,

Target Details

ECO:0000269|PubMed:21768292, ECO:0000269|PubMed:23125415, ECO:0000269|PubMed:24789099, ECO:0000269|PubMed:7523423}, Isoform 5: Isoform 5 displaces isoform 1 in striated muscles. {ECO:0000250}, (Microbial infection) Integrin ITGA2:ITGB1 acts as a receptor for human echoviruses 1 and 8 (PubMed:8411387). Acts as a receptor for cytomegalovirus/HHV-5 (PubMed:20660204). Acts as a receptor for Epstein-Barr virus/HHV-4 (PubMed:17945327). Integrin ITGA5:ITGB1 acts as a receptor for human parvovirus B19 (PubMed:12907437). Integrin ITGA2:ITGB1 acts as a receptor for human rotavirus (PubMed:12941907). Acts as a receptor for mammalian reovirus (PubMed:16501085). In case of HIV-1 infection, integrin ITGA5:ITGB1 binding to extracellular viral Tat protein seems to enhance angiogenesis in Kaposi's sarcoma lesions (PubMed:10397733). {ECO:0000269|PubMed:10397733, ECO:0000269|PubMed:12907437, ECO:0000269|PubMed:12941907, ECO:0000269|PubMed:16501085, ECO:0000269|PubMed:17945327, ECO:0000269|PubMed:20660204, ECO:0000269|PubMed:8411387}.

Molecular Weight: 87.4 kDa Including tag.

UniProt: [P05556](#)

Pathways: [Cell-Cell Junction Organization](#), [Regulation of G-Protein Coupled Receptor Protein Signaling](#), [CXCR4-mediated Signaling Events](#), [Signaling of Hepatocyte Growth Factor Receptor](#), [Integrin Complex](#), [SARS-CoV-2 Protein Interactome](#)

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

Handling Advice: Avoid repeated freeze-thaw cycles.

Storage: -80 °C

Storage Comment: Store at -80°C.

Expiry Date: Unlimited (if stored properly)

Images



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