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Datasheet for ABIN3113510
TGFBR1 Protein (AA 34-503) (rho-1D4 tag)

Overview

Quantity:	1 mg
Target:	TGFBR1
Protein Characteristics:	AA 34-503
Origin:	Human
Source:	Insect Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This TGFBR1 protein is labelled with rho-1D4 tag.
Application:	SDS-PAGE (SDS), Western Blotting (WB), ELISA, Crystallization (Crys)

Product Details

Sequence: LQCFCHLCTK DNFTCVTDGL CFVSVTETTD KVIHNSMCIA EIDLIPDRP FVCAPSSKTG
SVTTTYCCNQ DHCNKIELPT TVKSSPGLGP VELA AVIAGP VCFVCISLML MVYICHNRTV
IHHRVPNEED PSLDRPFISE GTTLKDLIYD MTTSGSGSGL PLLVQRTIAR TIVLQESIGK
GRFGEVWRGK WRGEEVAVKI FSSREERSWF REAEIYQTMV LRHENILGFI AADNKDNGTW
TQLWLVS DYH EHGSLFDYLN RYTVTVEGMI KLALSTASGL AHLHMEIVGT QGKPAIAHRD
LKSKNILVKK NGTCCADLG LAVRHDSATD TIDIAPNHRV GTKRYMAPEV LDDSINMKHF
ESFKRADIYA MGLVFWEIAR RCSIGGIHED YQLPYYDLVP SDPSVEEMRK VVCEQKLRPN
IPNRWQSCEA LRVMAKIMRE CWYANGAARL TALRIKKTLS QLSQQEGIKM

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 TGFBR1 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: <ol style="list-style-type: none">1. Membrane proteins are fractioned 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 chromatograph. 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
Endotoxin Level:	Protein is endotoxin-free.
Grade:	Crystallography grade

Target Details

Target:	TGFBR1
Alternative Name:	TGFBR1 (TGFBR1 Products)
Background:	<p>Transmembrane serine/threonine kinase forming with the TGF-beta type II serine/threonine kinase receptor, TGFBR2, the non-promiscuous receptor for the TGF-beta cytokines TGFB1, TGFB2 and TGFB3. Transduces the TGFB1, TGFB2 and TGFB3 signal from the cell surface to the cytoplasm and is thus regulating a plethora of physiological and pathological processes including cell cycle arrest in epithelial and hematopoietic cells, control of mesenchymal cell proliferation and differentiation, wound healing, extracellular matrix production, immunosuppression and carcinogenesis. The formation of the receptor complex composed of 2 TGFBR1 and 2 TGFBR2 Molecules symmetrically bound to the cytokine dimer results in the phosphorylation and the activation of TGFBR1 by the constitutively active TGFBR2. Activated TGFBR1 phosphorylates SMAD2 which dissociates from the receptor and interacts with SMAD4. The SMAD2-SMAD4 complex is subsequently translocated to the nucleus where it modulates the transcription of the TGF-beta-regulated genes. This constitutes the canonical SMAD-dependent TGF-beta signaling cascade. Also involved in non-canonical, SMAD-independent TGF-beta signaling pathways. For instance, TGFBR1 induces TRAF6 autoubiquitination which in turn results in MAP3K7 ubiquitination and activation to trigger apoptosis. Also regulates epithelial to mesenchymal transition through a SMAD-independent signaling pathway through PARD6A phosphorylation and activation.</p> <p>{ECO:0000269 PubMed:15761148, ECO:0000269 PubMed:16754747, ECO:0000269 PubMed:18758450, ECO:0000269 PubMed:7774578, ECO:0000269 PubMed:8752209, ECO:0000269 PubMed:8980228, ECO:0000269 PubMed:9346908}.</p>
Molecular Weight:	54.1 kDa Including tag.
UniProt:	P36897
Pathways:	Growth Factor Binding

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

Application Details

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)
