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Datasheet for ABIN3092630  
**FGD1 Protein (AA 1-961) (Strep Tag)**

### Overview

Quantity:	1 mg
Target:	FGD1
Protein Characteristics:	AA 1-961
Origin:	Human
Source:	Tobacco ( <i>Nicotiana tabacum</i> )
Protein Type:	Recombinant
Purification tag / Conjugate:	This FGD1 protein is labelled with Strep Tag.
Application:	ELISA, SDS-PAGE (SDS), Western Blotting (WB)

### Product Details

Sequence: MHGHRAPGGA GPSEPEHPAT NPPGAAPPAC ADSDPGASEP GLLARRGSGS ALGGPLDPQF  
VGPSDTSLGA APGHRVLPCG PSPQHHRALR FSYHLEGSQP RPGLHQGNRI LVKSLSLDPG  
QSLEPHPEGP QLRSDPGPP TETPSQRSP LKRAPGPKPQ VPPKPSYLM PRMPPPLEPI  
PPPPSRPLPA DPRVAKGLAP RAEASPSSAA VSSLIEKFER EPVIVASDRP VGPSPGPPE  
PVMLPQPTSQ PPVPQLPEGE ASRCLFLLAP GPRDGEKVPN RDSGIDSISS PSNSEETCFV  
SDDGPPSHSL CPGPPALASV PVALADPHRP GSQEVSDLE EEDDEEEEE KDREIPVPLM  
ERQESVELTV QQKVFHIANE LLQTEKAYVS RLHLLDQVFC ARLLLEARNR SSFPADVHVG  
IFSNICSIYC FHQQFLLPEL EKRMEEWDY PRIGDILQKL APFLKMYGEY VKNFDRAVEL  
VNTWTERSTQ FKVIIHEVQK EEACGNLTQ HHMLEPVQRI PRYELLKDY LKLPHGSPD  
SKDAQSLEL IATAAEHSNA AIRKMERMHK LLKVYELLGG EEDIVSPTKE LIKEGHILKL  
SAKNGTTQDR YLILFNDRLL YCVPRLLLG QKFSVRARID VGMELKESS NLNLPRTFLV  
SGKQRSLELQ ARTEEEKDW VQAINSTLLK HEQTLETFLK LNSTNREDED TPPNSPNVDL

GKRAPTPIRE KEVTMCMRCQ EPFNSITKRR HHCKACGHVV CGKCSEFRAR LVYDNNRSNR  
VCTDCYVALH GVPGSSPACS QHTPQRRRSI LEKQASVAAE NSVICSFLHY MEKGGKGWHK  
AWFVVPENEP LVLYIYGAPQ DVKAQRSLPL IGFEVGPPEA GERPDRRHVF KITQSHLSWY  
FSPETEELQR RWMAVLGRAG RGDTFCPGPT LSEDTREMEA PVAALGATAE PPESPQTRDK T

**Sequence without tag. The proposed Strep-Tag is based on experience s with the expression system, a different complexity of the protein could make another tag necessary. In case you have a special request, please contact us.**

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### Characteristics:

#### Key Benefits:

- Made in Germany - from design to production - by highly experienced protein experts.
- Protein expressed with ALiCE® and purified by multi-step, protein-specific process to ensure correct folding and modification.
- These proteins are normally active (enzymatically functional) as our customers have reported (not tested by us and not guaranteed).
- 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.

#### Expression System:

- ALiCE®, our Almost Living Cell-Free Expression System is based on a lysate obtained from *Nicotiana tabacum* c.v.. This contains all the protein expression machinery needed to produce even the most difficult-to-express proteins, including those that require post-translational modifications.
- During lysate production, the cell wall and other cellular components that are not required for protein production are removed, leaving only the protein production machinery and the mitochondria to drive the reaction. During our lysate completion steps, the additional components needed for protein production (amino acids, cofactors, etc.) are added to produce something that functions like a cell, but without the constraints of a living system - all that's needed is the DNA that codes for the desired protein!

#### Concentration:

- 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.

## Product Details

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- We use the ExPASy's ProtParam tool to determine the absorption coefficient of each protein.

Purification:	Two step purification of proteins expressed in Almost Living Cell-Free Expression System (ALiCE®): <ol style="list-style-type: none"><li>1. In a first purification step, the protein is purified from the cleared cell lysate using StrepTag capture material. Eluate fractions are analyzed by SDS-PAGE.</li><li>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.</li></ol>
Purity:	>80 % as determined by SDS PAGE, Size Exclusion Chromatography and Western Blot.
Endotoxin Level:	Low Endotoxin less than 1 EU/mg (< 0.1 ng/mg)

## Target Details

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Target:	FGD1
Alternative Name:	FGD1 ( <a href="#">FGD1 Products</a> )
Background:	FYVE, RhoGEF and PH domain-containing protein 1 (Faciogenital dysplasia 1 protein) (Rho/Rac guanine nucleotide exchange factor FGD1) (Rho/Rac GEF) (Zinc finger FYVE domain-containing protein 3),FUNCTION: Activates CDC42, a member of the Ras-like family of Rho- and Rac proteins, by exchanging bound GDP for free GTP. Plays a role in regulating the actin cytoskeleton and cell shape. {ECO:0000269 PubMed:8969170}.
Molecular Weight:	106.6 kDa
UniProt:	<a href="#">P98174</a>
Pathways:	<a href="#">Neurotrophin Signaling Pathway</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:	ALiCE®, our Almost Living Cell-Free Expression System is based on a lysate obtained from <i>Nicotiana tabacum</i> c.v.. This contains all the protein expression machinery needed to produce even the most difficult-to-express proteins, including those that require post-translational modifications.

## Application Details

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During lysate production, the cell wall and other cellular components that are not required for protein production are removed, leaving only the protein production machinery and the mitochondria to drive the reaction. During our lysate completion steps, the additional components needed for protein production (amino acids, cofactors, etc.) are added to produce something that functions like a cell, but without the constraints of a living system - all that's needed is the DNA that codes for the desired protein!

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Restrictions: For Research Use only

## Handling

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Format: Liquid

Buffer: The buffer composition is at the discretion of the manufacturer. If you have a special request, please contact us.

Handling Advice: Avoid repeated freeze-thaw cycles.

Storage: -80 °C

Storage Comment: Store at -80°C.

Expiry Date: Unlimited (if stored properly)