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Datasheet for ABIN3134802  
**FGFR4 Protein (AA 17-799) (rho-1D4 tag)**

### Overview

Quantity:	1 mg
Target:	FGFR4
Protein Characteristics:	AA 17-799
Origin:	Mouse
Source:	Insect Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This FGFR4 protein is labelled with rho-1D4 tag.
Application:	SDS-PAGE (SDS), Western Blotting (WB), ELISA, Crystallization (Crys)

### Product Details

Sequence: LSLEAEEEME QEPCLAPILE QQEQVLTVAL GQPVRLCCGR TERGRHWYKE GSRLASAGRV  
RGWRGRLEIA SFLPEDAGRY LCLARGSMTV VHNLTLMDL SLTSISNDED PKTLSSSSSSG  
HVYPQQAPYW THPQRMEKKL HAVPAGNTVK FRCPAAGNPM PTIHWLKDQ AFHGENRIGG  
IRLRHQHWSL VMESVPSDR GTYTCLVENS LGSIRYSYLL DVLERSPHRP ILQAGLPANT  
TAVVGSDEL LCKVYSDAQP HIQWLKHVVI NGSSFGADGF PYVQVLKTTD INSSEVEVLY  
LRNVAEDAG EYTCLAGNSI GLSYQSAWLT VLPEEDLTWT TATPEARYTD IILVSGSLV  
LLVLLLLAGV YHRQVIRGHY SRQPVTIQKL SRFPLARQFS LESRSSGKSS LSLVRGVRLS  
SSGPPLLTGL VNLDLPLDPL WEFPRDRLVL GKPLGEGCFG QVRAEAFGM DPSRPDQTST  
VAVKMLKDNA SDKDLADLVS EMEVMKLIGR HKNIINLLGV CTQEGPLYVI VECAAKGNLR  
EFLRARRPPG PDLSPDGPRS SEGPLSFPAL VSCAYQVARG MQYLESRKC IHRDLAARNVL  
VTEDDVMKIA DFGLARGVHH IDYYKKT SNG RLPVKWMAPE ALFDRVYTHQ SDVWSFEILL  
WEIFTLGGSP YGIPVEELF SLLREGHRME RPPNCPSELY GLMRECWHAA PSQRPTFKQL

VEALDKVLLA VSEELYDLRL TFGPFSPSNG DASSTCSSSD SVFSDHPLPL EPSPPFFSDS QTT

**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.
- Mouse Fgfr4 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:

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.
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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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## Product Details

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Endotoxin Level: Protein is endotoxin-free.

Grade: Crystallography grade

## Target Details

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Target: FGFR4

Alternative Name: Fgfr4 ([FGFR4 Products](#))

Background: Tyrosine-protein kinase that acts as cell-surface receptor for fibroblast growth factors and plays a role in the regulation of cell proliferation, differentiation and migration, and in regulation of lipid metabolism, bile acid biosynthesis, glucose uptake, vitamin D metabolism and phosphate homeostasis. Required for normal down-regulation of the expression of CYP7A1, the rate-limiting enzyme in bile acid synthesis, in response to FGF19. Phosphorylates PLCG1 and FRS2. Ligand binding leads to the activation of several signaling cascades. Activation of PLCG1 leads to the production of the cellular signaling molecules diacylglycerol and inositol 1,4,5-trisphosphate. Phosphorylation of FRS2 triggers recruitment of GRB2, GAB1, PIK3R1 and SOS1, and mediates activation of RAS, MAPK1/ERK2, MAPK3/ERK1 and the MAP kinase signaling pathway, as well as of the AKT1 signaling pathway. Promotes SRC-dependent phosphorylation of the matrix protease MMP14 and its lysosomal degradation. FGFR4 signaling is down-regulated by receptor internalization and degradation, MMP14 promotes internalization and degradation of FGFR4. Plays a role in postnatal lung development. May be involved in the development of skeletal muscle cell lineages. {ECO:0000269|PubMed:10809780, ECO:0000269|PubMed:17664243, ECO:0000269|PubMed:19237543, ECO:0000269|PubMed:21561999, ECO:0000269|PubMed:9716527}.

Molecular Weight: 88.1 kDa Including tag.

UniProt: [Q03142](#)

Pathways: [RTK Signaling](#), [Fc-epsilon Receptor Signaling Pathway](#), [EGFR Signaling Pathway](#), [Neurotrophin Signaling Pathway](#), [Carbohydrate Homeostasis](#), [Growth Factor Binding](#)

## 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: Protein has not been tested for activity yet. In cases in which it is highly likely that the

## Application Details

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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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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)