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Datasheet for ABIN3090471  
**CACNA1F Protein (AA 1442-1977) (His tag)**

### Overview

Quantity:	1 mg
Target:	CACNA1F
Protein Characteristics:	AA 1442-1977
Origin:	Human
Source:	Insect Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This CACNA1F protein is labelled with His tag.
Application:	Western Blotting (WB), SDS-PAGE (SDS), ELISA, Crystallization (Crys)

### Product Details

Sequence: DNF DY LTRDW SILGPHHLDE FKRIWSEYDP GAKGRIKHLD VVALLRRIQP PLGFGKLCPH  
RVACKRLVAM NMPLNSDGT VTFNATLFALV RTSLKIKTEG NLEQANQELR IVIKKIWKRM  
KQKLLDEVIP PPDEEEVTVG KFYATFLIQD YFRKFRRRKE KGLLGND AAP STSSALQAGL  
RSLQDLGPEM RQALTC DTEE EEEEGQEGVE EEDEKDLETN KATMVSQPSA RRGSGISVSL  
PVGDRLPDSL SFGPSDDDRG TPTSSQPSVP QAGSNTHRRG SGALIFTIPE EGNSQPKGTK  
GQNKQDEDEE VPDRLSYLDE QAGTPPCSVL LPPHRAQRYM DGHLVPRRRL LPPTPAGRKP  
SFTIQCLQRQ GSCEDLPIPG TYHRGRNSGP NRAQGSWATP PQRGRLLYAP LLLVEEGAAG  
EGYLGRSSGP LRTFTCLHVP GTHSDPSHGK RGSADSLVEA VLISEGLGLF ARDPRFVALA  
KQEIADACRL TLDEMNAAS DLLAQGTSSL YSDEESILSR FDEEDLGDEM ACVHAL

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

## Product Details

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### Characteristics:

- Made in Germany - from design to production - by highly experienced protein experts.
- Human CACNA1F 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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### Sterility:

0.22 µm filtered

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### Endotoxin Level:

Protein is endotoxin free.

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### Grade:

Crystallography grade

## Target Details

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Target:	CACNA1F
Alternative Name:	CACNA1F ( <a href="#">CACNA1F Products</a> )
Background:	Voltage-sensitive calcium channels (VSCC) mediate the entry of calcium ions into excitable cells and are also involved in a variety of calcium-dependent processes, including muscle contraction, hormone or neurotransmitter release, gene expression, cell motility, cell division and cell death. The isoform alpha-1F gives rise to L-type calcium currents. Long-lasting (L-type) calcium channels belong to the 'high-voltage activated' (HVA) group. They are blocked by dihydropyridines (DHP), phenylalkylamines, benzothiazepines, and by omega-agatoxin-IIIa (omega-Aga-IIIa). They are however insensitive to omega-conotoxin-GVIA (omega-CTx-GVIA) and omega-agatoxin-IVA (omega-Aga-IVA).
Molecular Weight:	60.1 kDa Including tag.
UniProt:	<a href="#">O60840</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)