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Datasheet for ABIN3093421  
**KCNU1 Protein (AA 313-1149) (His tag)**

### Overview

Quantity:	1 mg
Target:	KCNU1
Protein Characteristics:	AA 313-1149
Origin:	Human
Source:	Insect Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This KCNU1 protein is labelled with His tag.
Application:	ELISA, SDS-PAGE (SDS), Western Blotting (WB), Crystallization (Crys)

### Product Details

Sequence: ELFANKRKYT SSYEALKGKK FIVVCGNITV DSVTAFLRNF LRDKSGEINT EIVFLGETPP  
SLELETIFKC YLAYTTFISG SAMKWEDLRR VAVESAEACL IIANPLCSDS HAEDISNIMR  
VLSIKNYDST TRIIIQILQS HNKVYLPKIP SWNWDTGDNI ICFAELKLG F IAQGCLVPG L  
CTFLTSLFVE QNKKVMPKQT WKKHFLNSMK NKILTQRLSD DFAGMSFPEV ARLCFLKMHL  
LLIAIEYKSL FTDGFCGLIL NPPPQVRIRK NTLGFFIAET PKDVRRALFY CSVCHDDVFI  
PELITNCGCK SRSRQHITVP SVKRMKKCLK GISSRISGQD SPPrVSASTS SISNFTTRTL  
QHDVEQSDQ LDSSGMFHCW KPTSLDKVTL KRTGKSKYKF RNHIVACVFG DAHSAPMGLR  
NFVMPLRAS N YTRKELKDIV FIGSLDYLR EWRFLWNFPQ IYILPGCALY S GDLHAANIE  
QCSMCAVLSP PPQPSSNQL VDTEAIMATL TIGSLQIDSS SDPSPSVSEE TPGYTNGHNE  
KSNCRKVPIL TELKNPSNIH FIEQLGGLEG SLQETNLHLS TAFSTGTVFS GSFLDSSLAT  
AFYNYHVLEL LQMLVTGGVS SQLEQHLDKD KVG VADSCT SLLSGRNRCK LGLLSLHETI  
LSDVNPRNTF GQLFCGSLDL FGILCVGLYR IIDEEELNPE NKRFVITRPA NEFKLLPSDL

VFCAIPFSTA CYKRNEEFSL QKSYEIVNKA SQTTEHSDT NCPPTIDSVT ETLYSPVYSY  
QPRTNLSLFP KQIAWNQSRT NSIISSQIPL GDNAKENERK TSDEVYDEDP FAYSEPL

**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.
- Human KCNU1 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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## Product Details

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Grade: Crystallography grade

## Target Details

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Target: KCNU1

Alternative Name: KCNU1 ([KCNU1 Products](#))

Background: Testis-specific potassium channel activated by both intracellular pH and membrane voltage that mediates export of K(+). May represent the primary spermatozoan K(+) current. In contrast to KCNMA1/SLO1, it is not activated by Ca(2+) or Mg(2+). Critical for fertility. May play an important role in sperm osmoregulation required for the acquisition of normal morphology and motility when faced with osmotic challenges, such as those experienced after mixing with seminal fluid and entry into the vagina. {ECO:0000269|PubMed:23129643}.

Molecular Weight: 94.9 kDa Including tag.

UniProt: [A8MYU2](#)

## 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)