

Datasheet for ABIN3131830 KCNU1 Protein (AA 1-1121) (rho-1D4 tag)



[Go to Product page](#)

1 Image

Overview

Quantity:	1 mg
Target:	KCNU1
Protein Characteristics:	AA 1-1121
Origin:	Mouse
Source:	Insect Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This KCNU1 protein is labelled with rho-1D4 tag.
Application:	Crystallization (Crys), ELISA, SDS-PAGE (SDS), Western Blotting (WB)

Product Details

Sequence:	<p>MSQTLDSL N QKELTETSCT IEIQAAFILS SLATFFGG LI ILFLFRIALK SSRSWKYVKG</p> <p>PRGLLELFSS RRIEANPLRK LYFHGVFRQR IEMLLSAQTV VGQVLVILVF VLSIGSLVIY</p> <p>FINSMDPVRR CSSYEDKIVH GDLSFNAFFS FYFGLRFWAA EDKIKFWLEM NSIVDIFTIP</p> <p>PTFISYYLKS NWLGLRFLRA LRLLELPKIL QILQVIKTSN SVKLSKLLSI VISTWFTAAG</p> <p>FLHLVENS GD PWNNGRNSQT MSYFESIYLV TATMSTVGFG DVVAKTSLGR IFIVFFTLGS</p> <p>LILFANYIPE MVELFSTRKK YTKPYEAVKG KKFIVCGNI TVDSVTAFLR NFLHWKSGEI</p> <p>NIEIVFLGET LPCLELETLL KCHTSCTNFV CGTALKFEDL KRVAVENSEA CLILANHFCS</p> <p>DLHDEDNSNI MRVLSIKNYY PQTRVVIQIL QSQNKVFLSK IPNWDWSAGD NILCFAELKL</p> <p>GFIAQGCLVP GLCTFLTTLF IEQNQKVFPK HPWQKHFLNG LKNKILTQRL SNDFVGMFTFP</p> <p>QVSR LCFVKL NLMLIAI QHK PFFHSCCTLI LNPSSQVRLN KDTLGFFIAD SSKAVKRAFF</p> <p>YCSNCHSDVC NPELIGKCNC KIKSRQQLIA PTIMVMKSSL TDFTTSSHIH ASMSTEIHTC</p> <p>FSREQPSLIT ITTNRPTTND TVDDTDMLDS SGMFHWCRAM PLDKVVLKRS EKAKHEFQNH</p>
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IVVCVFGDAQ CTLVGLRNFV MPLRASNYTR QELKDIVFIG SLEYFQREWR FLRNFPKIHI
MPGSALYMGD LIAVNVEQCS MCVILATPYK ALSSQILVDT EAIMATLNIQ SLRITSPTPG
SSKSEVKPSS AFDSKERKQR YKQIPILTEL KNPSNIHFIE QMGGLDGMLK GTSLHLSTSF
STGAVFSDTF LDSLLATSFY NYHVVELLQM LVTGGISSEM EHYLVKEKPY KTTDDYEAIK
SGRTRCKLGL LSLDQTVLSG INPRKTFGQL FCGSLDNFGI LCVGLYRMID EEEPSQEHKR
FVITRPSNEC HLLPSDLVFC AIPFNTTCGK SDSSPSIQAQ NNSTNATTPL AQGSNFFDSH
HADESHDLYP VDDTGERWSQ HHHSRVYPLD TLDASDIVQE K

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.
- Mouse 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.

Purification:

Three step purification of membrane proteins expressed in baculovirus infected SF9 insect cells:

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

Product Details

- 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:	KCNU1
Alternative Name:	Kcnu1 (KCNU1 Products)
Background:	Testis-specific potassium channel activated by both intracellular pH and membrane voltage that mediates export of K(+). Represents 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:11696614, ECO:0000269 PubMed:11723163, ECO:0000269 PubMed:15201331, ECO:0000269 PubMed:16940554, ECO:0000269 PubMed:16940555, ECO:0000269 PubMed:21427226, ECO:0000269 PubMed:23129643, ECO:0000269 PubMed:9452476}.
Molecular Weight:	128.0 kDa Including tag.
UniProt:	O54982

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:	Protein has not been tested for activity yet. 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

Application Details

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

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)

Images



Image 1. „Crystallography Grade“ protein due to multi-step, protein-specific purification process