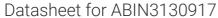
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Kv2.2 Protein (AA 1-907) (rho-1D4 tag)





Go to Product page

Overview

Quantity:	1 mg
Target:	Kv2.2 (KCNB2)
Protein Characteristics:	AA 1-907
Origin:	Mouse
Source:	Insect Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This Kv2.2 protein is labelled with rho-1D4 tag.
Application:	Crystallization (Crys), ELISA, SDS-PAGE (SDS), Western Blotting (WB)

Product Details

Sequence:

MAEKAPPGLN RKTSRSTLSL PPEPVDIIRS KTCSRRVKIN VGGLNHEVLW RTLDRLPRTR
LGKLRDCNTH ESLLEVCDDY NLNENEYFFD RHPGAFTSIL NFYRTGKLHM MEEMCALSFG
QELDYWGIDE IYLESCCQAR YHQKKEQMNE ELRREAETMR EREGEEFDNT CCPEKRKKLW
DLLEKPNSSV AAKILAIVSI LFIVLSTIAL SLNTLPELQE NDEFGQPSDN RKLAHVEAVC
IAWFTMEYLL RFLSSPNKWK FFKGPLNVID LLAILPYYVT IFLTESNKSV LQFQNVRRVV
QIFRIMRILR ILKLARHSTG LQSLGFTLRR SYNELGLLIL FLAMGIMIFS SLVFFAEKDE DATKFTSIPA
SFWWATITMT TVGYGDIYPK TLLGKIVGGL CCIAGVLVIA LPIPIIVNNF SEFYKEQKRQ
EKAIKRREAL ERAKRNGSIV SMNLKDAFAR SMELIDVAVE KAGESANTKD SVDDNHLSPS
RWKWARKALS ETSSNKSYEN KYQEVSQNDS HEHLNNTSSS SPQHLSAQKL EMLYNEITKT
QPHSHPNPDC QEQPERPCVY EEEIEMEEVI CPQEQLAVAQ TEVIVDMKST SSIDSFTSCA
TDFTETERSP LPPPSASHLQ MKFPTDLPGT DEHQRARAPP FLTLSRDKGP AAREAAVDYA
PIDITVNLDA GASHGPLQPD SASDSPKSSL KGSNPLKSRS LKVNFQENRA SAPQTPPSTA

RPLPVTTADF PLTTPQHMST ILLEEALPQG QPPLLEADDS AHCQGPSKGF SPRFPKQKLF PFSSRERRSF TEIDTGEDED FLDLQRSRPD KQADPSPNCL ADKPGDARDS LREEGCVGSS SPQNTDHNCR QDIYQAVGEV KKDSSQEGYK MENHLFAPEI HSNPGDTGHC PTRETSM

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 Kcnb2 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 receival 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 rho1D4 tag via two rho1D4 antibody columns: one DTT resistant, the other one not. Eluate fractions are analyzed by Western blot.
- 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.

Product Details >95 % as determined by SDS PAGE, Size Exclusion Chromatography and Western Blot. Purity: Sterility: 0.22 µm filtered Endotoxin Level: Protein is endotoxin-free Grade: Crystallography grade **Target Details** Target: Kv2.2 (KCNB2) Kcnb2 (KCNB2 Products) Alternative Name: Background: Voltage-gated potassium channel that mediates transmembrane potassium transport in excitable membranes, primarily in the brain and smooth muscle cells. Channels open or close in response to the voltage difference across the membrane, letting potassium ions pass in accordance with their electrochemical gradient. Homotetrameric channels mediate a delayedrectifier voltage-dependent outward potassium current that display rapid activation and slow inactivation in response to membrane depolarization. Can form functional homotetrameric and heterotetrameric channels that contain variable proportions of KCNB1, channel properties depend on the type of alpha subunits that are part of the channel. Can also form functional heterotetrameric channels with other alpha subunits that are non-conducting when expressed alone, such as KCNS1 and KCNS2, creating a functionally diverse range of channel complexes. In vivo, membranes probably contain a mixture of heteromeric potassium channel complexes, making it difficult to assign currents observed in intact tissues to any particular potassium channel family member. Contributes to the delayed-rectifier voltage-gated potassium current in cortical pyramidal neurons and smooth muscle cells. {ECO:0000250|UniProtKB:Q63099}. Molecular Weight: 103.5 kDa Including tag. UniProt: **A6H8H5** 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 gurantee 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

molecular weight tag (e.g. GST-tag) instead to increase solubility. We will discuss all possible

Application Details

	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

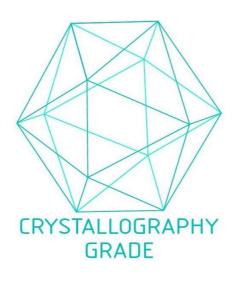


Image 1. "Crystallography Grade" protein due to multi-step, protein-specific purification process