Datasheet for ABIN3117144

Kv2.2 Protein (AA 1-911) (Strep Tag)

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Overview

Quantity:	1 mg
Target:	Kv2.2 (KCNB2)
Protein Characteristics:	AA 1-911
Origin:	Human
Source:	Tobacco (Nicotiana tabacum)
Protein Type:	Recombinant
Purification tag / Conjugate:	This Kv2.2 protein is labelled with Strep Tag.
Application:	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 CCPDKRKKLW DLLEKPNSSV AAKILAIVSI LFIVLSTIAL SLNTLPELQE TDEFGQLNDN RQLAHVEAVC IAWFTMEYLL RFLSSPNKWK FFKGPLNVID LLAILPYYVT IFLTESNKSV LQFQNVRRVV QIFRIMRILR ILKLARHSTG LQSLGFTLRR SYNELGLLIL FLAMGIMIFS SLVFFAEKDE DATKFTSIPA SFWWATITMT TVGYGDIYPK TLLGKIVGGL CCIAGVLVIA LPIPIIVNNF SEFYKEQKRQ EKAIKRREAL ERAKRNGSIV SMNLKDAFAR SMELIDVAVE KAGESANTKD SADDNHLSPS RWKWARKALS ETSSNKSFEN KYQEVSQKDS HEQLNNTSSS SPQHLSAQKL EMLYNEITKT QPHSHPNPDC QEKPERPSAY EEEIEMEEVV CPQEQLAVAQ TEVIVDMKST SSIDSFTSCA TDFTETERSP LPPPSASHLQ MKFPTDLPGT EEHQRARGPP FLTLSREKGP AARDGTLEYA PVDITVNLDA SGSQCGLHSP LQSDNATDSP KSSLKGSNPL KSRSLKVNFK ENRGSAPQTP

PSTARPLPVT TADFSLTTPQ HISTILLEET PSQGDRPLLG TEVSAPCQGP SKGLSPRFPK QKLFPFSSRE RRSFTEIDTG DDEDFLELPG AREEKQVDSS PNCFADKPSD GRDPLREEGS VGSSSPQDTG HNCRQDIYHA VSEVKKDSSQ EGCKMENHLF APEIHSNPGD TGYCPTRETS M

Sequence without tag. The proposed Strep-Tag is based on experience s with the expression system, a different complexity of the protein could make another tag necessary. In case you have a special request, please contact us.

Characteristics:

Key Benefits:

- Made in Germany - from design to production - by highly experienced protein experts.
- Protein expressed with ALiCE® and purified by multi-step, protein-specific process to ensure correct folding and modification.
- These proteins are normally active (enzymatically functional) as our customers have reported (not tested by us and not guaranteed).
- 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.

Expression System:

- ALiCE®, our Almost Living Cell-Free Expression System is based on a lysate obtained from Nicotiana tabacum c.v.. This contains all the protein expression machinery needed to produce even the most difficult-to-express proteins, including those that require post-translational modifications.
- During lysate production, the cell wall and other cellular components that are not required for protein production are removed, leaving only the protein production machinery and the mitochondria to drive the reaction. During our lysate completion steps, the additional components needed for protein production (amino acids, cofactors, etc.) are added to produce something that functions like a cell, but without the constraints of a living system - all that's needed is the DNA that codes for the desired protein!

Concentration:

- 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.
- We use the Expasy's ProtParam tool to determine the absorption coefficient of each protein.

Product Details

Purification:	Two step purification of proteins expressed in Almost Living Cell-Free Expression System (ALiCE®): 1. In a first purification step, the protein is purified from the cleared cell lysate using StrepTag capture material. 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.
Purity:	>80 % as determined by SDS PAGE, Size Exclusion Chromatography and Western Blot.
Endotoxin Level:	Low Endotoxin less than 1 EU/mg (< 0.1 ng/mg)
Grade:	Crystallography grade

Target Details

Target:	Kv2.2 (KCNB2)
Alternative Name:	KCNB2 (KCNB2 Products)
Background:	Potassium voltage-gated channel subfamily B member 2 (Voltage-gated potassium channel subunit Kv2.2),FUNCTION: 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 delayed-rectifier 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:A6H8H5, ECO:0000250|UniProtKB:Q63099}.
Molecular Weight:	102.6 kDa
UniProt:	Q92953

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:	ALiCE®, our Almost Living Cell-Free Expression System is based on a lysate obtained from Nicotiana tabacum c.v.. This contains all the protein expression machinery needed to produce even the most difficult-to-express proteins, including those that require post-translational modifications. During lysate production, the cell wall and other cellular components that are not required for protein production are removed, leaving only the protein production machinery and the mitochondria to drive the reaction. During our lysate completion steps, the additional components needed for protein production (amino acids, cofactors, etc.) are added to produce something that functions like a cell, but without the constraints of a living system - all that's needed is the DNA that codes for the desired protein!
Restrictions:	For Research Use only

Handling

Format:	Liquid
Buffer:	The buffer composition is at the discretion of the manufacturer. If you have a special request, please contact us.
Handling Advice:	Avoid repeated freeze-thaw cycles.
Storage:	-80 °C
Storage Comment:	Store at -80°C.
Expiry Date:	Unlimited (if stored properly)

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

