Datasheet for ABIN3114004

KCNQ4 Protein (AA 1-695) (Strep Tag)

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Overview

Quantity:	1 mg
Target:	KCNQ4
Protein Characteristics:	AA 1-695
Origin:	Human
Source:	Tobacco (Nicotiana tabacum)
Protein Type:	Recombinant
Purification tag / Conjugate:	This KCNQ4 protein is labelled with Strep Tag.
Application:	ELISA, Western Blotting (WB), SDS-PAGE (SDS)

Product Details

Sequence:	MAEAPPRRLG LGPPPGDAPR AELVALTAVQ SEQGEAGGGG SPRRLGLLGS PLPPGAPLPG PGSGSGSACG QRSSAAHKRY RRLQNWVYNV LERPRGWAFV YHVFIFLLVF SCLVLSVLST IQEHQELANE CLLILEFVMI VVFGLEYIVR VWSAGCCCRY RGWQGRFRFA RKPFCVIDFI VFVASVAVIA AGTQGNIFAT SALRSMRFLQ ILRMVRMDRR GGTWKLLGSV VYAHSKELIT AWYIGFLVLI FASFLVYLAE KDANSDFSSY ADSLWWGTIT LTTIGYGDKT PHTWLGRVLA AGFALLGISF FALPAGILGS GFALKVQEQH RQKHFEKRRM PAANLIQAAW RLYSTDMSRA YLTATWYYYD SILPSFRELA LLFEHVQRAR NGGLRPLEVR RAPVPDGAPS RYPPVATCHR PGSTSFCPGE SSRMGIKDRI RMGSSQRRTG PSKQHLAPPT MPTSPSSEQV GEATSPTKVQ KSWSFNDRTR FRASLRLKPR TSAEDAPSEE VAEEKSYQCE LTVDDIMPAV KTVIRSIRIL KFLVAKRKFK ETLRPYDVKD VIEQYSAGHL DMLGRIKSLQ TRVDQIVGRG PGDRKAREKG DKGPSDAEVV DEISMMGRVV KVEKQVQSIE HKLDLLLGFY SRCLRSGTSA SLGAVQVPLF DPDITSDYHS PVDHEDISVS AQTLSISRSV STNMD

Product Details

	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.
Purification:	Two step purification of proteins expressed in Almost Living Cell-Free Expression System (ALiCE®):

Product Details

	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)

Target Details

Target:	KCNQ4
Alternative Name:	KCNQ4 (KCNQ4 Products)
Background:	Potassium voltage-gated channel subfamily KQT member 4 (KQT-like 4) (Potassium channel subunit alpha KvLQT4) (Voltage-gated potassium channel subunit Kv7.4),FUNCTION: Probably important in the regulation of neuronal excitability. May underlie a potassium current involved in regulating the excitability of sensory cells of the cochlea. KCNQ4 channels are blocked by linopirdin, XE991 and bepridil, whereas clofilium is without significant effect. Muscarinic agonist oxotremorine-M strongly suppress KCNQ4 current in CHO cells in which cloned KCNQ4 channels were coexpressed with M1 muscarinic receptors.
Molecular Weight:	77.1 kDa
UniProt:	P56696
Pathways:	Sensory Perception of Sound

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

Application Details

	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)

