Datasheet for ABIN3118439

KCNQ5 Protein (AA 1-932) (Strep Tag)

1 Image

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Overview

Quantity:	1 mg
Target:	KCNQ5
Protein Characteristics:	AA 1-932
Origin:	Human
Source:	Tobacco (Nicotiana tabacum)
Protein Type:	Recombinant
Purification tag / Conjugate:	This KCNQ5 protein is labelled with Strep Tag.
Application:	ELISA, Western Blotting (WB), SDS-PAGE (SDS)

Product Details

Sequence:	MPRHHAGGEE GGAAGLWVKS GAAAAAAGGG RLGSGMKDVE SGRGRVLLNS AAARGDGLLL LGTRAATLGG GGGGLRESRR GKQGARMSLL GKPLSYTSSQ SCRRNVKYRR VQNYLYNVLE RPRGWAFIYH AFVFLLVFGC LILSVFSTIP EHTKLASSCL LILEFVMIVV FGLEFIIRIW SAGCCCRYRG WQGRLRFARK PFCVIDTIVL IASIAVVSAK TQGNIFATSA LRSLRFLQIL RMVRMDRRGG TWKLLGSVVY AHSKELITAW YIGFLVLIFS SFLVYLVEKD ANKEFSTYAD ALWWGTITLT TIGYGDKTPL TWLGRLLSAG FALLGISFFA LPAGILGSGF ALKVQEQHRQ KHFEKRRNPA ANLIQCVWRS YAADEKSVSI ATWKPHLKAL HTCSPTKKEQ GEASSSQKLS FKERVRMASP RGQSIKSRQA SVGDRRSPST DITAEGSPTK VQKSWSFNDR TRFRPSLRLK SSQPKPVIDA DTALGTDDVY DEKGCQCDVS VEDLTPPLKT VIRAIRIMKF HVAKRKFKET LRPYDVKDVI EQYSAGHLDM LCRIKSLQTR VDQILGKGQI TSDKKSREKI TAEHETTDDL SMLGRVVKVE KQVQSIESKL DCLLDIYQQV LRKGSASALA LASFQIPPFE CEQTSDYQSP VDSKDLSGSA QNSGCLSRST SANISRGLQF ILTPNEFSAQ TFYALSPTMH SQATQVPISQ

SDGSAVAATN TIANQINTAP KPAAPTTLQI PPPLPAIKHL PRPETLHPNP AGLQESISDV TTCLVASKEN VQVAQSNLTK DRSMRKSFDM GGETLLSVCP MVPKDLGKSL SVQNLIRSTE ELNIQLSGSE SSGSRGSQDF YPKWRESKLF ITDEEVGPEE TETDTFDAAP QPAREAAFAS DSLRTGRSRS SQSICKAGES TDALSLPHVK LK

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.

Product Details

- 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®): 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:	KCNQ5
Alternative Name:	KCNQ5 (KCNQ5 Products)
Background:	Potassium voltage-gated channel subfamily KQT member 5 (KQT-like 5) (Potassium channel subunit alpha KvLQT5) (Voltage-gated potassium channel subunit Kv7.5),FUNCTION: Associates with KCNQ3 to form a potassium channel which contributes to M-type current, a slowly activating and deactivating potassium conductance which plays a critical role in determining the subthreshold electrical excitability of neurons. Therefore, it is important in the regulation of neuronal excitability. May contribute, with other potassium channels, to the molecular diversity of a heterogeneous population of M-channels, varying in kinetic and pharmacological properties, which underlie this physiologically important current. Insensitive to tetraethylammonium, but inhibited by barium, linopirdine and XE991. Activated by niflumic acid and the anticonvulsant retigabine. As the native M-channel, the potassium channel composed of KCNQ3 and KCNQ5 is also suppressed by activation of the muscarinic acetylcholine receptor CHRM1. {ECO:0000269|PubMed:10787416, ECO:0000269|PubMed:11159685, ECO:0000269|PubMed:28669405}.
Molecular Weight:	102.2 kDa
UniProt:	Q9NR82

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