Datasheet for ABIN3114512

# KCNH2 Protein (AA 1-1159) (Strep Tag)

Go to Product page

## Overview

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| Quantity: | 250 µg |
| Target: | KCNH2 |
| Protein Characteristics: | AA 1-1159 |
| Origin: | Human |
| Source: | Cell-free protein synthesis (CFPS) |
| Protein Type: | Recombinant |
| Purification tag / Conjugate: | This KCNH2 protein is labelled with Strep Tag. |
| Application: | ELISA, Western Blotting (WB), SDS-PAGE (SDS) |

## Product Details

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| Brand: | AliCE® |
| Sequence: | MPVRRGHVAP QNTFLDTIIR KFEGQSRKFI IANARVENCA VIYCNDGFCE LCGYSRAEVM QRPCTCDFLH GPRTQRRAAA QIAQALLGAE ERKVEIAFYR KDGSCFLCLV DVVPVKNEDG AVIMFILNFE VVMEKDMVGS PAHDTNHRGP PTSWLAPGRA KTFRLKLPAL LALTARESSV RSGGAGGAGA PGAVVVDVDL TPAAPSSESL ALDEVTAMDN HVAGLGPAEE RRALVGPGSP PRSAPGQLPS PRAHSLNPDA SGSSCSLART RSRESCASVR RASSADDIEA MRAGVLPPPP RHASTGAMHP LRSGLLNSTS DSDLVRYRTI SKIPQITLNF VDLKGDPFLA SPTSDREIIA PKIKERTHNV TEKVTQVLSL GADVLPEYKL QAPRIHRWTI LHYSPFKAVW DWLILLLVIY TAVFTPYSAA FLLKETEEGP PATECGYACQ PLAVVDLIVD IMFIVDILIN FRTTYVNANE EVVSHPGRIA VHYFKGWFLI DMVAAIPFDL LIFGSGSEEL IGLLKTARLL RLVRVARKLD RYSEYGAAVL FLLMCTFALI AHWLACIWYA IGNMEQPHMD SRIGWLHNLG DQIGKPYNSS GLGGPSIKDK YVTALYFTFS SLTSVGFGNV SPNTNSEKIF SICVMLIGSL MYASIFGNVS |

AIIQRLYSGT ARYHTQMLRV REFIRFHQIP NPLRQRLEEY FQHAWSYTNG IDMNAVLKGF PECLQADICL HLNRSLLQHC KPFRGATKGC LRALAMKFKT THAPPGDTLV HAGDLLTALY FISRGSIEIL RGDVVVAILG KNDIFGEPLN LYARPGKSNG DVRALTYCDL HKIHRDDLLE VLDMYPEFSD HFWSSLEITF NLRDTNMIPG SPGSTELEGG FSRQRKRKLS FRRRTDKDTE QPGEVSALGP GRAGAGPSSR GRPGGPWGES PSSGPSSPES SEDEGPGRSS SPLRLVPFSS PRPPGEPPGG EPLMEDCEKS SDTCNPLSGA FSGVSNIFSF WGDSRGRQYQ ELPRCPAPTP SLLNIPLSSP GRRPRGDVES RLDALQRQLN RLETRLSADM ATVLQLLQRQ MTLVPPAYSA VTTPGPGPTS TSPLLPVSPL PTLTLDSLSQ VSQFMACEEL PPGAPELPQE GPTRRLSLPG QLGALTSQPL HRHGSDPGS

**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 in one-step affinity chromatography
- 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 try to ensure that you receive soluble 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!

## Product Details

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| | Concentration:<br>• The concentration of our recombinant proteins is measured using the absorbance at 280nm.<br>• The protein's absorbance will be measured against its specific reference buffer.<br>• We use the Expasy's ProtParam tool to determine the absorption coefficient of each protein. |
| Purification: | One-step Strep-tag purification of proteins expressed in Almost Living Cell-Free Expression System (AliCE®). |
| Purity: | > 70-80 % as determined by SDS PAGE, Western Blot and analytical SEC (HPLC). |
| Grade: | custom-made |

## Target Details

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| Target: | KCNH2 |
| Alternative Name: | KCNH2 (KCNH2 Products) |
| Background: | Potassium voltage-gated channel subfamily H member 2 (Eag homolog) (Ether-a-go-go-related gene potassium channel 1) (ERG-1) (Eag-related protein 1) (Ether-a-go-go-related protein 1) (H-ERG) (hERG-1) (hERG1) (Voltage-gated potassium channel subunit Kv11.1),FUNCTION: Pore-forming (alpha) subunit of voltage-gated inwardly rectifying potassium channel. Channel properties are modulated by cAMP and subunit assembly. Mediates the rapidly activating component of the delayed rectifying potassium current in heart (IKr) (PubMed:18559421, PubMed:26363003, PubMed:27916661). {ECO:0000269\|PubMed:18559421, ECO:0000269\|PubMed:26363003, ECO:0000269\|PubMed:27916661}., FUNCTION: [Isoform A-USO]: Has no channel activity by itself, but modulates channel characteristics by forming heterotetramers with other isoforms which are retained intracellularly and undergo ubiquitin-dependent degradation. {ECO:0000269\|PubMed:18559421}., FUNCTION: [Isoform B-USO]: Has no channel activity by itself, but modulates channel characteristics by forming heterotetramers with other isoforms which are retained intracellularly and undergo ubiquitin-dependent degradation. {ECO:0000269\|PubMed:18559421}. |
| Molecular Weight: | 126.7 kDa |
| UniProt: | Q12809 |

## Application Details

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| Application Notes: | In addition to the applications listed above we expect the protein to work for functional studies |

## Application Details

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| | 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.<br>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

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| Format: | Liquid |
| Buffer: | The buffer composition is at the discretion of the manufacturer.<br>Standard Storage Buffer: PBS pH 7.4, 10 % Glycerol **Might differ depending on protein.** |
| Handling Advice: | Avoid repeated freeze-thaw cycles. |
| Storage: | -80 °C |
| Storage Comment: | Store at -80°C. |
| Expiry Date: | 12 months |