

[Go to Product page](#)

Datasheet for ABIN7554302  
**KCNK1 Protein (AA 1-336) (His tag)**

## Overview

Quantity:	1 mg
Target:	KCNK1
Protein Characteristics:	AA 1-336
Origin:	Human
Source:	HEK-293 Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This KCNK1 protein is labelled with His tag.

## Product Details

Purpose:	Custom-made recombinant KCNK1 Protein expressed in mammalian cells.
Sequence:	MLQSLAGSSC VRLVERHRSA WCFGFLVLGY LLYLVFGAVV FSSVELPYED LLRQELRKLK RRFLEEHECL SEQQLEQLG RVLEASNYGV SVLSNASGNW NWDFTSALFF ASTVLSTTGY GHTVPLSDGG KAFCIYSVI GIPFTLLFLT AVVQRITVHV TRRPVLYFHI RWGFSKQVVA IVHAVLLGFV TVSCFFFIPA AVFSVLEDDW NFLESFYFCF ISLSTIGLGD YVPGEGYNQK FRELYKIGIT CYLLLGLIAM LVVLETFCEL HELKKFRKMF YVKKDKDEDQ VHIIHDQLS FSSITDQAAG MKEDQKQNEP FVATQSSACV DGPANH <b>Sequence without tag. The proposed Purification-Tag is based on experiences 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.</b>
Specificity:	If you are looking for a specific domain and are interested in a partial protein or a different isoform, please contact us regarding an individual offer.
Characteristics:	Key Benefits:

## Product Details

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- Made to order protein - from design to production - by highly experienced protein experts.
- Protein expressed in mammalian cells and purified in one-step affinity chromatography
- The optimized expression system ensures reliability for intracellular, secreted and transmembrane proteins.
- 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.

If you are not interested in a full length protein, please contact us for individual protein fragments.

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.

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Purity:	> 90 % as determined by Bis-Tris PAGE, anti-tag ELISA, Western Blot and analytical SEC (HPLC)
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Grade:	custom-made
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## Target Details

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Target:	KCNK1
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Alternative Name:	KCNK1 ( <a href="#">KCNK1 Products</a> )
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Background:	<p>Potassium channel subfamily K member 1 (Inward rectifying potassium channel protein TWIK-1) (Potassium channel K2P1) (Potassium channel KCNO1),FUNCTION: Ion channel that contributes to passive transmembrane potassium transport and to the regulation of the resting membrane potential in brain astrocytes, but also in kidney and in other tissues (PubMed:15820677, PubMed:21653227). Forms dimeric channels through which potassium ions pass in accordance with their electrochemical gradient. The channel is selective for K(+) ions at physiological potassium concentrations and at neutral pH , but becomes permeable to Na(+) at subphysiological K(+) levels and upon acidification of the extracellular medium (PubMed:21653227, PubMed:22431633). The homodimer has very low potassium channel activity, when expressed in heterologous systems, and can function as weakly inward rectifying potassium channel (PubMed:8605869, PubMed:8978667, PubMed:15820677, PubMed:21653227, PubMed:22431633, PubMed:23169818, PubMed:25001086). Channel activity is modulated by activation of serotonin receptors (By similarity). Heterodimeric channels containing KCNK1 and KCNK2 have much higher activity, and may represent the</p>
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## Target Details

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predominant form in astrocytes (By similarity). Heterodimeric channels containing KCNK1 and KCNK3 or KCNK9 have much higher activity (PubMed:23169818). Heterodimeric channels formed by KCNK1 and KCNK9 may contribute to halothane-sensitive currents (PubMed:23169818). Mediates outward rectifying potassium currents in dentate gyrus granule cells and contributes to the regulation of their resting membrane potential (By similarity). Contributes to the regulation of action potential firing in dentate gyrus granule cells and down-regulates their intrinsic excitability (By similarity). In astrocytes, the heterodimer formed by KCNK1 and KCNK2 is required for rapid glutamate release in response to activation of G-protein coupled receptors, such as F2R and CNR1 (By similarity). Required for normal ion and water transport in the kidney (By similarity). Contributes to the regulation of the resting membrane potential of pancreatic beta cells (By similarity). The low channel activity of homodimeric KCNK1 may be due to sumoylation (PubMed:15820677, PubMed:20498050, PubMed:23169818). The low channel activity may be due to rapid internalization from the cell membrane and retention in recycling endosomes (PubMed:19959478). {ECO:0000250|UniProtKB:O08581, ECO:0000250|UniProtKB:Q9Z2T2, ECO:0000269|PubMed:15820677, ECO:0000269|PubMed:17693262, ECO:0000269|PubMed:19959478, ECO:0000269|PubMed:20498050, ECO:0000269|PubMed:21653227, ECO:0000269|PubMed:22282804, ECO:0000269|PubMed:22431633, ECO:0000269|PubMed:23169818, ECO:0000269|PubMed:25001086, ECO:0000269|PubMed:8605869, ECO:0000269|PubMed:8978667}.

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Molecular Weight: 38.1 kDa

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UniProt: [O00180](#)

## Application Details

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Application Notes: We expect the protein to work for functional studies. As the protein has not been tested for functional studies yet we cannot offer a guarantee though.

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Restrictions: For Research Use only

## Handling

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Format: Liquid

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Buffer: The buffer composition is at the discretion of the manufacturer.

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Handling Advice: Avoid repeated freeze-thaw cycles.

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## Handling

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Storage: -80 °C

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Storage Comment: Store at -80°C.

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Expiry Date: 12 months