Datasheet for ABIN7563639

KCNC2 Protein (AA 1-642) (His tag)

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Overview

Quantity:	1 mg
Target:	KCNC2
Protein Characteristics:	AA 1-642
Origin:	Mouse
Source:	HEK-293 Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This KCNC2 protein is labelled with His tag.

Product Details

Purpose:	Custom-made recombinant Kcnc2 Protein expressed in mammalian cells.
Sequence:	MGKIESNERV ILNVGGTRHE TYRSTLKTLP GTRLALLASS EPQGDCLTAA GDKLQPLPPP LSPPPRPPPL SPVPSGCFEG GAGNCSSHGG NGGNGGSDHP GGGREFFFDR HPGVFAYVLN YYRTGKLHCP ADVCGPLFEE ELAFWGIDET DVEPCCWMTY RQHRDAEEAL DIFETPDLIG GDPGDDEDLA AKRLGIEDAA GLGGPDGKSG RWRKLQPRMW ALFEDPYSSR AARFIAFASL FFILVSITTF CLETHEAFNI VKNKTEPVIN GTSPVLQYEI ETDPALTYVE GVCVVWFTFE FLVRIVFSPN KLEFIKNLLN IIDFVAILPF YLEVGLSGLS SKAAKDVLGF LRVVRFVRIL RIFKLTRHFV GLRVLGHTLR ASTNEFLLLI IFLALGVLIF ATMIYYAERV GAQPNDPSAS EHTQFKNIPI GFWWAVVTMT TLGYGDMYPQ TWSGMLVGAL CALAGVLTIA MPVPVIVNNF GMYYSLAMAK QKLPRKRKKH IPPAPLASSP TFCKTELNMA CNSTQSDTCL GKENRLLEHN RSVLSGDDST GSEPPLSPPE RLPIRRSSTR DKNRRGETCF LLTTGDYTCA SDGGIRKGYE KSRSLNNIAG LAGNALRLSP VTSPYNSPCP LRRSRSPIPS IL **Sequence without tag. The proposed Purification-Tag is based on experiences with the expression system, a different complexity**

Product Details

	of the protein could make another tag necessary. In case you have a special request, please contact us.
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: • 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.
Purity:	> 90 % as determined by Bis-Tris PAGE, anti-tag ELISA, Western Blot and analytical SEC (HPLC)
Grade:	custom-made

Target Details

Target:	KCNC2
Alternative Name:	Kcnc2 (KCNC2 Products)
Background:	Potassium voltage-gated channel subfamily C member 2 (Shaw-like potassium channel) (Voltage-gated potassium channel Kv3.2),FUNCTION: Voltage-gated potassium channel that mediates transmembrane potassium transport in excitable membranes, primarily in the brain. Contributes to the regulation of the fast action potential repolarization and in sustained high-frequency firing in neurons of the central nervous system (PubMed:10561420, PubMed:10414303, PubMed:11124984, PubMed:10903572, PubMed:11506885, PubMed:15317859, PubMed:15917463, PubMed:17761775, PubMed:21414897). Homotetramer channels mediate delayed-rectifier voltage-dependent potassium currents that activate rapidly at high-threshold voltages and inactivate slowly (PubMed:10414303). Forms

Target Details

	tetrameric channels through which potassium ions pass in accordance with their electrochemical gradient. The channel alternates between opened and closed conformations in response to the voltage difference across the membrane (By similarity). Can form functional homotetrameric and heterotetrameric channels that contain variable proportions of KCNC1, and possibly other family members as well, channel properties depend on the type of alpha subunits that are part of the channel (PubMed:10531438, PubMed:12000114). Channel properties may be modulated by either the association with ancillary subunits, such as KCNE1, KCNE2 and KCNE3 or indirectly by nitric oxide (NO) through a cGMP- and PKG-mediated signaling cascade, slowing channel activation and deactivation of delayed rectifier potassium channels (By similarity). Contributes to fire sustained trains of very brief action potentials at high frequency in thalamocortical and suprachiasmatic nucleus (SCN) neurons, in hippocampal and neocortical interneurons and in retinal ganglion cells (PubMed:10561420, PubMed:10903572, PubMed:11506885, PubMed:17761775). Sustained maximal action potential firing frequency in inhibitory hippocampal interneurons is negatively modulated by histamine H2 receptor activation in a cAMP- and protein kinase (PKA) phosphorylation-dependent manner (PubMed:10903572). Plays a role in maintaining the fidelity of synaptic transmission in neocortical GABAergic interneurons by generating action potential (AP) repolarization at nerve terminals, thus reducing spike-evoked calcium influx and GABA neurotransmitter release (PubMed:15917463). Required for long-range synchronization of gamma oscillations over distance in the neocortex (PubMed:22539821). Contributes to the modulation of the circadian rhythm of spontaneous action potential firing in suprachiasmatic nucleus (SCN) neurons in a light-dependent manner (PubMed:21414897). {ECO:0000250|UniProtKB:P22462, ECO:0000269|PubMed:10531438, ECO:0000269|PubMed:10561420, ECO:0000269|PubMed:10903572, ECO:0000269|PubMed:11124984, ECO:0000269|PubMed:12000114, ECO:0000269|PubMed:15317859, ECO:0000269|PubMed:15917463, ECO:0000269|PubMed:17761775, ECO:0000269|PubMed:21414897, ECO:0000269|PubMed:22539821, ECO:0000305|PubMed:10414303, ECO:0000305|PubMed:11506885}.
Molecular Weight:	70.5 kDa
UniProt:	Q14B80

Application Details

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.

Application Details

Restrictions:	For Research Use only

Handling

Format:	Liquid
Buffer:	The buffer composition is at the discretion of the manufacturer.
Handling Advice:	Avoid repeated freeze-thaw cycles.
Storage:	-80 °C
Storage Comment:	Store at -80°C.
Expiry Date:	12 months

