Datasheet for ABIN7565260

KCND2 Protein (AA 1-630) (His tag)

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Overview

Quantity:	1 mg
Target:	KCND2
Protein Characteristics:	AA 1-630
Origin:	Mouse
Source:	HEK-293 Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This KCND2 protein is labelled with His tag.

Product Details

Purpose:	Custom-made recombinant Kcnd2 Protein expressed in mammalian cells.
Sequence:	MAAGVAAWLP FARAAAIGWM PVASGPMPAP PRQERKRTQD ALIVLNVSGT RFQTWQDTLE RYPDTLLGSS ERDFFYHPET QQYFFDRDPD IFRHILNFYR TGKLHYPRHE CISAYDEELA FFGLIPEIIG DCCYEEYKDR RRENAERLQD DADTDNTGES ALPTMTARQR VWRAFENPHT STMALVFYYV TGFFIAVSVI ANVVETVPCG SSPGHIKELP CGERYAVAFF CLDTACVMIF TVEYLLRLAA APSRYRFVRS VMSIIDVVAI LPYYIGLVMT DNEDVSGAFV TLRVFRVFRI FKFSRHSQGL RILGYTLKSC ASELGFLLFS LTMAIIIFAT VMFYAEKGSS ASKFTSIPAA FWYTIVTMTT LGYGDMVPKT IAGKIFGSIC SLSGVLVIAL PVPVIVSNFS RIYHQNQRAD KRRAQKKARL ARIRAAKSGS ANAYMQSKRN GLLSNQLQSS EDEPAFISKS GSSFETQHHH LLHCLEKTTN HEFVDEQVFE ESCMEVATVN RPSSHSPSLS SQQGVTSTCC SRRHKKTFRI PNANVSGSHR GSVQELSTIQ IRCVERTPLS NSRSSLNAKM EECVKLNCEQ PYVTTAIISI PTPPVTTPEG DDRPESPEYS GGNIVRVSAL **Sequence without tag. The proposed Purification-Tag is based on experiences with the expression system, a different complexity of the**

Product Details

	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:	KCND2
Alternative Name:	Kcnd2 (KCND2 Products)
Background:	Potassium voltage-gated channel subfamily D member 2 (Voltage-gated potassium channel subunit Kv4.2),FUNCTION: Voltage-gated potassium channel that mediates transmembrane potassium transport in excitable membranes, primarily in the brain, but also in rodent heart. Mediates the major part of the dendritic A-type current I(SA) in brain neurons (PubMed:10818150, PubMed:17122039, PubMed:18045912, PubMed:18187474, PubMed:20371829, PubMed:22815518). This current is activated at membrane potentials that are below the threshold for action potentials. It regulates neuronal excitability, prolongs the latency before the first spike in a series of action potentials, regulates the frequency of repetitive action potential firing, shortens the duration of action potentials and regulates the

Target Details

	back-propagation of action potentials from the neuronal cell body to the dendrites (PubMed:10818150, PubMed:17122039, PubMed:22815518). Contributes to the regulation of the circadian rhythm of action potential firing in suprachiasmatic nucleus neurons, which regulates the circadian rhythm of locomotor activity (PubMed:22815518). Functions downstream of the metabotropic glutamate receptor GRM5 and plays a role in neuronal excitability and in nociception mediated by activation of GRM5 (PubMed:18045912). Mediates the transient outward current I(to) in rodent heart left ventricle apex cells, but not in human heart, where this current is mediated by another family member (PubMed:9734479, PubMed:10601491, PubMed:11909823, PubMed:23713033). Forms tetrameric potassium-selective 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 (PubMed:9734479, PubMed:22311982). Can form functional homotetrameric channels and heterotetrameric channels that contain variable proportions of KCND2 and KCND3, channel properties depend on the type of pore-forming alpha subunits that are part of the channel (PubMed:11909823). In vivo, membranes probably contain a mixture of heteromeric potassium channel complexes (PubMed:11909823). Interaction with specific isoforms of the regulatory subunits KCNIP1, KCNIP2, KCNIP3 or KCNIP4 strongly increases expression at the cell surface and thereby increases channel activity, it modulates the kinetics of channel activation and inactivation, shifts the threshold for channel activation to more negative voltage values, shifts the threshold for inactivation to less negative voltages and accelerates recovery after inactivation (By similarity). Likewise, interaction with DPP6 or DPP10 promotes expression at the cell membrane and regulates both channel characteristics and activity (PubMed:22311982). {ECO:0000250|UniProtKB:Q63881, ECO:0000269|PubMed:10601491, ECO:0000269|PubMed:10818150, ECO:0000269|PubMed:11909823, ECO:0000269|PubMed:17122039, ECO:0000269|PubMed:18187474, ECO:0000269|PubMed:20371829, ECO:0000269|PubMed:22311982, ECO:0000269|PubMed:23713033, ECO:0000269|PubMed:9734479}.
Molecular Weight:	70.6 kDa
UniProt:	Q9Z0V2

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

