

**KCNC2 Antibody (C-term)**  
**Affinity Purified Rabbit Polyclonal Antibody (Pab)**  
**Catalog # AP13871b****Specification**

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**KCNC2 Antibody (C-term) - Product Information**

Application	WB,E
Primary Accession	<a href="#">Q96PR1</a>
Other Accession	<a href="#">P22462</a> , <a href="#">Q14B80</a> , <a href="#">NP_631874.1</a> , <a href="#">NP_631875.1</a> , <a href="#">NP_715624.1</a>
Reactivity	Mouse
Predicted	Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	70226
Antigen Region	544-573

**KCNC2 Antibody (C-term) - Additional Information****Gene ID** 3747**Other Names**

Potassium voltage-gated channel subfamily C member 2, Voltage-gated potassium channel Kv32, KCNC2

**Target/Specificity**

This KCNC2 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 544-573 amino acids from the C-terminal region of human KCNC2.

**Dilution**

WB~~1:1000

E~~Use at an assay dependent concentration.

**Format**

Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.

**Storage**

Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

**Precautions**

KCNC2 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

**KCNC2 Antibody (C-term) - Protein Information**

**Name** KCNC2 ([HGNC:6234](#))

**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. Homotetramer channels mediate delayed-rectifier voltage-dependent potassium currents that activate rapidly at high- threshold voltages and inactivate slowly. Forms 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 (Probable) (PubMed:[15709110](#), PubMed:[35314505](#), PubMed:[36090251](#)). 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. Channel properties may be modulated either by the association with ancillary subunits, such as KCNE1, KCNE2 or 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 retinal ganglion cells, thalamocortical and suprachiasmatic nucleus (SCN) neurons and in hippocampal and neocortical interneurons (PubMed:[15709110](#)). 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. 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. Required for long-range synchronization of gamma oscillations over distance in the neocortex. Contributes to the modulation of the circadian rhythm of spontaneous action potential firing in suprachiasmatic nucleus (SCN) neurons in a light-dependent manner (By similarity).

**Cellular Location**

Cell membrane {ECO:0000250|UniProtKB:Q14B80}; Multi-pass membrane protein. Membrane {ECO:0000250|UniProtKB:Q14B80}; Multi-pass membrane protein. Perikaryon {ECO:0000250|UniProtKB:Q14B80}. Cell projection, axon {ECO:0000250|UniProtKB:Q14B80}. Cell projection, dendrite {ECO:0000250|UniProtKB:Q14B80}. Postsynaptic cell membrane {ECO:0000250|UniProtKB:Q14B80}. Presynaptic cell membrane {ECO:0000250|UniProtKB:Q14B80}. Synapse, synaptosome {ECO:0000250|UniProtKB:P22462}. Synapse {ECO:0000250|UniProtKB:P22462} Apical cell membrane {ECO:0000250|UniProtKB:P22462}. Basolateral cell membrane {ECO:0000250|UniProtKB:P22462}. Note=Colocalizes with parvalbumin in globus pallidus neurons. Localizes in thalamocortical axons and synapses. Localizes on the surface of cell somata, proximal dendrites and axonal membranes. Also detected throughout the neuropil Localized in starburst cell somata and proximal dendrite processes Colocalized with GABA in presynaptic terminals. Clustered in patches in somatic and proximal dendritic membrane as well as in axons and presynaptic terminals of GABAergic interneurons; some of these patches are found near postsynaptic sites. {ECO:0000250|UniProtKB:P22462, ECO:0000250|UniProtKB:Q14B80}

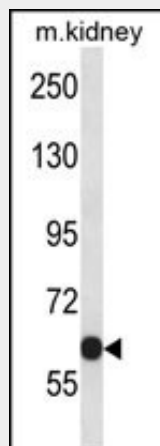
**KCNC2 Antibody (C-term) - Protocols**

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)

- [Flow Cytometry](#)
- [Cell Culture](#)

#### KCNC2 Antibody (C-term) - Images



KCNC2 Antibody (C-term) (Cat. #AP13871b) western blot analysis in mouse kidney tissue lysates (35ug/lane). This demonstrates the KCNC2 antibody detected the KCNC2 protein (arrow).

#### KCNC2 Antibody (C-term) - Background

The Shaker gene family of *Drosophila* encodes components of voltage-gated potassium channels and is comprised of four subfamilies. Based on sequence similarity, this gene is similar to one of these subfamilies, namely the Shaw subfamily. The protein encoded by this gene belongs to the delayed rectifier class of channel proteins and is an integral membrane protein that mediates the voltage-dependent potassium ion permeability of excitable membranes. Three transcript variants encoding three different isoforms have been found for this gene.

#### KCNC2 Antibody (C-term) - References

Wang, Z., et al. *J. Gen. Physiol.* 133(4):361-374(2009)  
Gutman, G.A., et al. *Pharmacol. Rev.* 57(4):473-508(2005)  
Haas, M., et al. *Mamm. Genome* 4(12):711-715(1993)