

Rabbit KCNC2 Polyclonal Antibody | anti-KCNC2 antibody

KCNC2 Antibody

CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA320885	Rabbit	Human, Mouse, Rat	ELISA, Immunocytochemistry, Immunofluorescence, Immunohistochemistry, Western Blot

PRODUCT SYNONYMS

KCNC2; Polyclonal Antibody; KCNC2 Antibody; KSHIIIA; Kv 3.2; Kv3.2d voltage gated potassium channel; Potassium channel Kv3.2; Shaw related voltage gated potassium channel protein 2; anti-KCNC2 antibody

PRODUCT SPECIFICATIONS

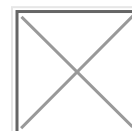
Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Isotype	IgG
Specificity	KCNC2 antibody detects endogenous levels of total KCNC2
Purity/Purification	The antiserum was purified by peptide affinity chromatography using SulfoLink Coupling Resin.
Form/Format	Liquid Phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Concentration	1mg/ml (varies by lot)
Sequence Length	618
Applicable Applications for anti-KCNC2 antibody	ELISA, ICC (Immunocytochemistry), IF (Immunofluorescence), IHC (Immunohistochemistry), WB (Western Blot)
Immunogen	A synthesized peptide derived from human KCNC2
Subcellular Location	Plasma Membrane
Predicted Cross Reactivity	Sheep, Rabbit
Similarity	Sheep (100%), Rabbit (100%)
Conjugation	Unconjugated
Preparation and Storage	Store at -20 degree C. Stable for 12 months from date of receipt.

IMAGES



IF (Immunofluorescence)

AAA320885 staining HepG2 by IF/ICC. The sample were fixed with PFA and permeabilized in 0.1% Triton X-100, then blocked in 10% serum for 45 minutes at 25 degree C. The primary antibody was diluted at 1/200 and incubated with the sample for 1 hour at 37 degree C. An Alexa Fluor 594 conjugated goat anti-rabbit IgG (H+L) Ab, diluted at 1/600, was used as the secondary antibody.



WB (Western Blot)

Western blot analysis on HepG2 cell lysate using KCNC2 Antibody, The lane on the left is treated with the antigen-specific peptide.



IHC (Immunohistochemistry)

AAA320885 at 1/100 staining human brain tissue sections by IHC-P. The tissue was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The tissue was then blocked and incubated with the antibody for 1.5 hours at 22 degree C. An HRP conjugated goat anti-rabbit antibody was used as the secondary.

ADDITIONAL INFORMATION

Related Product Information for anti-KCNC2 antibody

Description: KCNC2 Mediates the voltage-dependent potassium ion permeability of excitable membranes. Assuming opened or closed conformations in response to the voltage difference across the membrane, the protein forms a potassium-selective channel through which potassium ions may pass in accordance with their electrochemical gradient. Channel properties are modulated by subunit assembly.

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 (PubMed:15709110). 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).

Subunit Structure: Homotetramer and heterotetramer with other channel-forming alpha subunits, such as KCNC1. Interacts with KCNC1. Homotetramer or heterotetramer channel activity is regulated by association with modulating ancillary subunits such as KCNE1, KCNE2 and KCNE3, creating a functionally diverse range of channel complexes. Interacts with KCNE1, KCNE2 and KCNE3.

Post-translational Modifications: Phosphorylated by PKA in cortical synaptosomes. cAMP-dependent phosphorylation inhibits channel activity (By similarity). Histamine H2 receptor-and PKA-induced phosphorylation extends action potential spike duration, reduces action potential spike amplitude, sustains maximum firing frequency in hippocampal interneurons; also reduces the incidence of high-frequency oscillations in hippocampal CA3 pyramidal cell layers.

Similarity: The transmembrane segment S4 functions as voltage-sensor and is characterized by a series of positively charged amino acids at every third position. Channel opening and closing is effected by a conformation change that affects the position and orientation of the voltage-sensor paddle formed by S3 and S4 within the membrane. A transmembrane electric field that is positive inside would push the positively charged S4 segment outwards, thereby opening the pore, while a field that is negative inside would pull the S4 segment inwards and close the pore. Changes in the position and orientation of S4 are then transmitted to the activation gate formed by the inner helix bundle via the S4-S5 linker region. Belongs to the potassium channel family. C (Shaw) (TC 1.A.1.2) subfamily. Kv3.2/KCNC2 sub-subfamily.

NCBI AND UNIPROT INFORMATION

NCBI GI #	386781638
NCBI GeneID	3747
NCBI Accession #	NP_001247426.1

NCBI GenBank Nucleotide #	NM_001260497.1
UniProt Accession #	Q96PR1 ; Q4LE77 ; Q86W09 ; Q8N1V9 ; Q96PR0 ; B7Z231 ; F5H030 ; J3KPP5
Molecular Weight	Observed: 70 kDa Predicted: 71 kDa
NCBI Official Full Name	potassium voltage-gated channel subfamily C member 2 isoform 4
NCBI Official Synonym Full Names	potassium voltage-gated channel subfamily C member 2
NCBI Official Symbol	KCNC2
NCBI Official Synonym Symbols	KV3.2
NCBI Protein Information	potassium voltage-gated channel subfamily C member 2
UniProt Protein Name	Potassium voltage-gated channel subfamily C member 2
UniProt Gene Name	KCNC2

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

AAA Biotech | Tel: +1 (619) 604-9440 | Fax: +1 (619) 604-9441 | contact@aaabiotech.com

Online datasheet: <https://stage.aaabiotech.com/polyclonal/kcnc2-antibody-immunocytochemistry-immunofluorescence-immunohistochemistry-western-blot-elisa/320885>