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KCNN2 antibody - C-terminal region

Rabbit Polyclonal Antibody
Catalog # AI10786

Product Information

Application	WB, IHC
Primary Accession	Q9H2S1
Other Accession	NM_021614, NP_067627
Reactivity	Human, Mouse, Rat, Rabbit, Zebrafish, Pig, Dog, Horse, Bovine, Yeast
Predicted	Human, Mouse, Rat, Rabbit, Pig, Chicken, Dog, Horse, Bovine
Host	Rabbit
Clonality	Polyclonal
Calculated MW	63760

Additional Information

Gene ID	3781
Alias Symbol	SK2, hSK2, SKCA2, KCa2.2
Other Names	Small conductance calcium-activated potassium channel protein 2, SK2, SKCa 2, SKCa2, KCa2.2, KCNN2
Format	Liquid. Purified antibody supplied in 1x PBS buffer with 0.09% (w/v) sodium azide and 2% sucrose.
Reconstitution & Storage	Add 100 ul of distilled water. Final anti-KCNN2 antibody concentration is 1 mg/ml in PBS buffer with 2% sucrose. For longer periods of storage, store at 20°C. Avoid repeat freeze-thaw cycles.
Precautions	KCNN2 antibody - C-terminal region is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	KCNN2 (HGNC:6291)
Function	Small conductance calcium-activated potassium channel that mediates the voltage-independent transmembrane transfer of potassium across the cell membrane through a constitutive interaction with calmodulin which binds the intracellular calcium allowing its opening (PubMed:10991935, PubMed:33242881, PubMed:9287325). The current is characterized by a voltage-independent activation, an intracellular calcium concentration increase-dependent activation and a single- channel conductance of about 3 picosiemens (PubMed:10991935). Also presents an inwardly rectifying current, thus reducing its already small outward conductance of potassium ions, which is particularly the case when the membrane potential displays

positive values, above + 20 mV (PubMed:10991935). The inward rectification could be due to a blockade of the outward current by intracellular divalent cations such as calcium and magnesium and could also be due to an intrinsic property of the channel pore, independent of intracellular divalent ions. There are three positively charged amino acids in the S6 transmembrane domain, close to the pore, that collectively control the conductance and rectification through an electrostatic mechanism. Additionally, electrostatic contributions from these residues also play an important role in determining the intrinsic open probability of the channel in the absence of calcium, affecting the apparent calcium affinity for activation. Forms an heteromeric complex with calmodulin, which is constitutively associated in a calcium-independent manner. Channel opening is triggered when calcium binds the calmodulin resulting in a rotary movement leading to the formation of the dimeric complex to open the gate (By similarity). Plays a role in the repolarization phase of cardiac action potential (PubMed:13679367).

Cellular Location

Membrane; Multi-pass membrane protein. Cytoplasm, myofibril, sarcomere, Z line {ECO:0000250|UniProtKB:P58390}

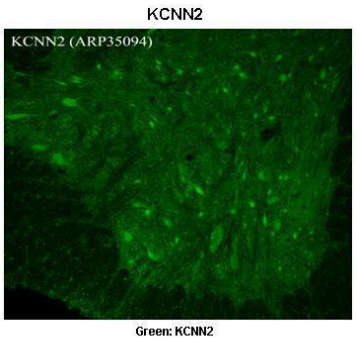
Tissue Location

Expressed in atrial myocytes (at protein level) (PubMed:13679367). Widely expressed.

References

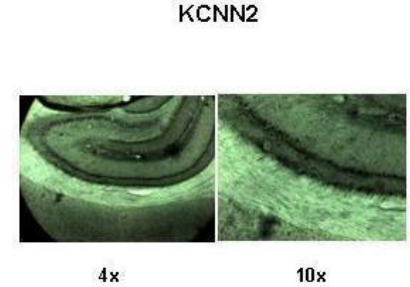
Feranchak,A.P., et al., (2004) Gastroenterology 127 (3), 903-913Reconstitution and Storage:For short term use, store at 2-8C up to 1 week. For long term storage, store at -20C in small aliquots to prevent freeze-thaw cycles.Publications:Chakroborty, S. et al. Early presynaptic and postsynaptic calcium signaling abnormalities mask underlying synaptic depression in presymptomatic Alzheimer's disease mice. J. Neurosci. 32, 8341-53 (2012). WB, IHC, Human, Yeast, Zebrafish, Mouse, Rat, Bovine, Dog, Pig, H, Rabbit, Guinea pig22699914

Images



See IHC 1 Data and Customer Feedback for more Information

Sample Type : Rhesus macaque spinal cord Primary Antibody Dilution : 1:300 Secondary Antibody : Donkey anti Rabbit 488 Secondary Antibody Dilution : 1:500 Color/Signal Descriptions : Green: KCNN2 Gene Name : KCNN2 Submitted by : Timur Mavlyutov, Ph. D., Department of Pharmacology, University of Wisconsin Medical School, 1300 University Avenue, Madison, WI 53706



See IHC 2 Data and Customer Feedback for more Information

Lanes: Rat brain section
Primary Antibody Dilution: 1:500
Secondary Antibody: Anti-rabbit-biotin, streptavidin-diaminobenzidine
Secondary Antibody Dilution: 1:500
Gene Name: KCNN2
Submitted by: Dr. Amiel Rosenkranz, Rosalind Franklin University

WB Suggested Anti-KCNN2 Antibody Titration: 1.25µg/ml
ELISA Titer: 1:62500
Positive Control: HepG2 cell lysate