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KCNN3 Rabbit pAb

Catalog # AP96510

Product Information

Application	WB
Primary Accession	Q9UGI6
Other Accession	Q9UGI6
Reactivity	Mouse
Predicted	Rat, Pig, Human, Rabbit, Chicken, Dog, Horse, Sheep
Host	Rabbit
Clonality	Polyclonal
Calculated MW	81385
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human KCNN3
Epitope Specificity	251-350/736
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SIMILARITY	Belongs to the potassium channel KCNN family. KCa2.3/KCNN3 subfamily.
SUBUNIT	Heterooligomer. The complex is composed of 4 channel subunits each of which binds to a calmodulin subunit which regulates the channel activity through calcium-binding
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	Action potentials in vertebrate neurons are followed by an afterhyperpolarization (AHP) that may persist for several seconds and may have profound consequences for the firing pattern of the neuron. Each component of the AHP is kinetically distinct and is mediated by different calcium-activated potassium channels. This gene belongs to the KCNN family of potassium channels. It encodes an integral membrane protein that forms a voltage-independent calcium-activated channel, which is thought to regulate neuronal excitability by contributing to the slow component of synaptic AHP. This gene contains two CAG repeat regions in the coding sequence. It was thought that expansion of one or both of these repeats could lead to an increased susceptibility to schizophrenia or bipolar disorder, but studies indicate that this is probably not the case. Alternatively spliced transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Feb 2011]

Additional Information

Gene ID	3782
Other Names	KCa2.3; SK3; SKCA3; ZLS3; hSK3; KCNN3_HUMAN; KCNN3; SKCa 3; K3; KCNN3_MOUSE; KCNN3_RAT; potassium calcium-activated channel subfamily N member 3; potassium intermediate/small conductance calcium-activated channel, subfamily N, member 3; potassium channel, calcium activated

	intermediate/small conductance subfamily N alpha, member 3; small conductance calcium-activated potassium channel 3
Dilution	WB=1:500-2000
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

Protein Information

Name	KCNN3 (HGNC:6292)
Synonyms	K3
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:12808432, PubMed:20562108, PubMed:31155282, PubMed:36502918). The current is characterized by a voltage-independent activation, an intracellular calcium concentration increase-dependent activation and a single-channel conductance of 10 picosiemens (PubMed:12808432, PubMed:20562108, PubMed:31155282, PubMed:36502918). 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:12808432). Activation is followed by membrane hyperpolarization. Thought to regulate neuronal excitability by contributing to the slow component of synaptic afterhyperpolarization (By similarity).
Cellular Location	Cell membrane; Multi-pass membrane protein. Cytoplasm, myofibril, sarcomere, Z line {ECO:0000250|UniProtKB:P58391}
Tissue Location	[Isoform 3]: Widely distributed in human tissues and is present at 20-60% of KCNN3 in the brain

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.