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Kv4.3 Rabbit pAb

Catalog # AP99866

Product Information

Application	IHC-P, IHC-F, IF
Primary Accession	Q9UK17
Other Accession	Q9UK17
Reactivity	Mouse
Predicted	Rat, Pig, Human, Rabbit, Chicken, Dog, Horse, Sheep
Host	Rabbit
Clonality	Polyclonal
Calculated MW	73451
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human Kv4.3
Epitope Specificity	451-550/655
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 family. D (Shal) (TC 1.A.1.2) subfamily. Kv4.3/KCND3 sub-subfamily.
SUBUNIT	Homotetramer or heterotetramer with KCND1 and/or KCND2. Interacts with DLG1. Associates with the regulatory subunits KCNIP1, KCNIP2, KCNIP3 and KCNIP4. Interacts with KCNE1, KCNE2, SCN1B and KCNAB1.
Post-translational modifications	Regulated through phosphorylation at Ser-569 by CaMK2D (By similarity).
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	Voltage gated potassium (Kv) channels represent the most complex class of voltage gated ion channels from both functional and structural standpoints. Their diverse functions include regulating neurotransmitter release, heart rate, insulin secretion, neuronal excitability, epithelial electrolyte transport, smooth muscle contraction, and cell volume. Four sequence related potassium channel genes (shaker, shaw, shab, and shal) have been identified in Drosophila, and each has been shown to have human homologs. This protein is a member of the potassium channel, voltage gated, shal related subfamily, members of which form voltage activated A type potassium ion channels and are prominent in the repolarization phase of the action potential. This member includes two isoforms with different sizes, which are encoded by alternatively spliced transcript variants of this gene.

Additional Information

Gene ID	3752
Other Names	BRGDA9; KCND3L; KCND3S; KSHIVB; KV4.3; SCA19; SCA22; Kncd3; KCND3_HUMAN; KCND3; Potassium voltage-gated channel subfamily D member 3; Voltage-gated potassium channel subunit Kv4.3; KCND3_MOUSE;

	KCND3_RAT; spinocerebellar ataxia 22; spinocerebellar ataxia 19; potassium voltage-gated channel, Shal-related subfamily, member 3
Dilution	IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500
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	KCND3
Function	Pore-forming (alpha) subunit of voltage-gated A-type potassium channels that mediates transmembrane potassium transport in excitable membranes, in brain and heart (PubMed:10200233, PubMed:17187064, PubMed:21349352, PubMed:22457051, PubMed:23280837, PubMed:23280838, PubMed:34997220, PubMed:9843794). In cardiomyocytes, may generate the transient outward potassium current I(To) (By similarity). In neurons, may conduct the transient subthreshold somatodendritic A-type potassium current (ISA) (By similarity). Kinetics properties are characterized by fast activation at subthreshold membrane potentials, rapid inactivation, and quick recovery from inactivation (PubMed:10200233, PubMed:17187064, PubMed:21349352, PubMed:22457051, PubMed:23280837, PubMed:23280838, PubMed:34997220, PubMed:9843794). Channel properties are modulated by interactions with regulatory subunits (PubMed:17187064, PubMed:34997220). Interaction with the regulatory subunits KCNIP1 or KCNIP2 modulates the channel gating kinetics namely channel activation and inactivation kinetics and rate of recovery from inactivation (PubMed:17187064, PubMed:34997220). Likewise, interaction with DPP6 modulates the channel gating kinetics namely channel activation and inactivation kinetics (PubMed:34997220).
Cellular Location	Cell membrane; Multi-pass membrane protein. Cell membrane, sarcolemma {ECO:0000250|UniProtKB:Q62897}; Multi-pass membrane protein. Cell projection, dendrite {ECO:0000250|UniProtKB:Q62897}. Note=Interaction with palmitoylated KCNIP2 and KCNIP3 enhances cell surface expression {ECO:0000250|UniProtKB:Q62897}
Tissue Location	Highly expressed in heart and brain, in particular in cortex, cerebellum, amygdala and caudate nucleus (PubMed:10200233, PubMed:10729221, PubMed:9843794). Detected at lower levels in liver, skeletal muscle, kidney and pancreas (PubMed:10200233, PubMed:10729221).

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