

Anti-Kv4.3 Picoband Antibody

Catalog # ABO11920

Product Information

Application	WB
Primary Accession	Q9UK17
Host	Rabbit
Reactivity	Human, Mouse
Clonality	Polyclonal
Format	Lyophilized
Description	Rabbit IgG polyclonal antibody for Potassium voltage-gated channel subfamily D member 3(KCND3) detection. Tested with WB in Human;Mouse.
Reconstitution	Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Additional Information

Gene ID	3752
Other Names	Potassium voltage-gated channel subfamily D member 3, Voltage-gated potassium channel subunit Kv4.3, KCND3
Calculated MW	73451
Application Details	Western blot, 0.1-0.5 µg/ml, Mouse, Human
Subcellular Localization	Membrane; Multi-pass membrane protein. Cell membrane, sarcolemma . Cell projection, dendrite .
Tissue Specificity	Highly expressed in heart and brain, in particular in cortex, cerebellum, amygdala and caudate nucleus. Detected at lower levels in liver, skeletal muscle, kidney and pancreas. Isoform 1 predominates in most tissues. Isoform 1 and isoform 2 are detected at similar levels in brain, skeletal muscle and pancreas. .
Source	Eukaryota
Protein Name	Potassium voltage-gated channel subfamily D member 3
Contents	Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na ₂ HPO ₄ , 0.05mg NaN ₃ .
Immunogen	E.coli-derived human Kv4.3 recombinant protein (Position: M1-H177). Human Kv4.3 shares 100% and 99% amino acid (aa) sequences identity with mouse and rat Kv4.3, respectively.
Purification	Immunogen affinity purified.

Cross Reactivity	No cross reactivity with other proteins
Storage	At -20° C for one year. After r° Constitution, at 4° C for one month. It° Can also be aliquotted and stored frozen at -20° C for a longer time. Avoid repeated freezing and thawing.
Sequence Similarities	Belongs to the potassium channel family. D (Shal) (TC 1.A.1.2) subfamily. Kv4.3/KCND3 sub-subfamily.

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).

Background

Potassium voltage-gated channel subfamily D member 3, also known as Kv4.3, is a protein that in humans is encoded by the KCND3 gene. KCND3 is a member of the potassium channel, voltage-gated, shal-related subfamily. 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. It is mapped to 1p13.2. KCND3 is important in membrane repolarization in excitable cells. It contributes to the cardiac transient outward potassium current (Ito1), the main contributing current to the repolarizing phase 1 of the cardiac action potential.

Images



Anti- Kv4.3 antibody, ABO11920, Western blotting
All lanes: Anti Kv4.3 (ABO11920) at 0.5ug/ml
WB: Mouse Brain Tissue Lysate at 50ug
Predicted bind size: 73KD
Observed bind size: 73KD

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