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# Anti-Kv4.3 Picoband Antibody

Catalog # ABO11920

## Product Information

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| **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

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| **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 □g/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 Na2HPO4, 0.05mg NaN3. |
| **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. |

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| **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

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| **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 blottingAll lanes: Anti Kv4.3 (ABO11920) at 0.5ug/mlWB: Mouse Brain Tissue Lysate at 50ugPredicted bind size: 73KDObserved bind size: 73KD

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