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Anti-Kv1.4 Antibody

Catalog # ABO11605

Product Information

Application	WB
Primary Accession	P22459
Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Format	Lyophilized
Description	Rabbit IgG polyclonal antibody for Potassium voltage-gated channel subfamily A member 4(KCNA4) detection. Tested with WB in Human;Mouse;Rat.
Reconstitution	Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Additional Information

Gene ID	3739
Other Names	Potassium voltage-gated channel subfamily A member 4, HPCN2, Voltage-gated K(+) channel HuKII, Voltage-gated potassium channel HBK4, Voltage-gated potassium channel HK1, Voltage-gated potassium channel subunit Kv1.4, KCNA4, KCNA4L
Calculated MW	73257
Application Details	Western blot, 0.1-0.5 □g/ml, Human, Rat, Mouse
Subcellular Localization	Cell membrane ; Multi-pass membrane protein . Cell projection, axon .
Tissue Specificity	Detected in heart ventricle. .
Source	Eukaryota
Protein Name	Potassium voltage-gated channel subfamily A member 4
Contents	Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg Thimerosal, 0.05mg NaN3.
Immunogen	A synthetic peptide corresponding to a sequence in the middle region of human Kv1.4(329-344aa LPEFRDDRDLVMALSA), different from the related mouse and rat sequences by one amino acid.
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.

Protein Information

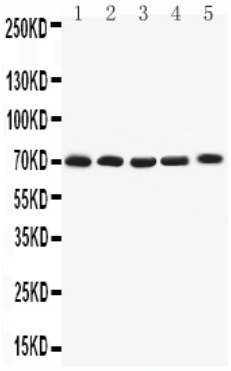
Name	KCNA4
Synonyms	KCNA4L
Function	Voltage-gated potassium channel that mediates transmembrane potassium transport in excitable membranes. Forms tetrameric potassium- selective channels through which potassium ions pass in accordance with their electrochemical gradient. The channel alternates between opened and closed conformations in response to the voltage difference across the membrane (PubMed:19912772, PubMed:8495559). Can form functional homotetrameric channels and heterotetrameric channels that contain variable proportions of KCNA1, KCNA2, KCNA4, KCNA5, and possibly other family members as well; channel properties depend on the type of alpha subunits that are part of the channel (PubMed:8495559). Channel properties are modulated by cytoplasmic beta subunits that regulate the subcellular location of the alpha subunits and promote rapid inactivation. In vivo, membranes probably contain a mixture of heteromeric potassium channel complexes, making it difficult to assign currents observed in intact tissues to any particular potassium channel family member. Homotetrameric KCNA4 forms a potassium channel that opens in response to membrane depolarization, followed by rapid spontaneous channel closure (PubMed:19912772, PubMed:8495559). Likewise, a heterotetrameric channel formed by KCNA1 and KCNA4 shows rapid inactivation (PubMed:17156368).
Cellular Location	Cell membrane; Multi-pass membrane protein Cell projection, axon {ECO:0000250|UniProtKB:P15385}
Tissue Location	Expressed in brain, and at lower levels in the testis, lung, kidney, colon and heart (PubMed:27582084). Detected in heart ventricle.

Background

Potassium voltage-gated channel subfamily A member 4, also known as Kv1.4 or PCN2, is a protein that in humans is encoded by the KCNA4 gene. This gene encodes a member of the potassium channel, voltage-gated, shaker-related subfamily. It is mapped to 11p14.1. KCNA4 belongs to the A-type potassium current class, the members of which may be important in the regulation of the fast repolarizing phase of action potentials in heart and thus may influence the duration of cardiac action potential. KCNA4 also contributes to the cardiac transient outward potassium current(Ito1), the main contributing current to the repolarizing phase 1 of the cardiac action potential. This gene has been shown to interact with DLG4, KCNA2 and DLG1.

Images

Anti-Kv1.4 antibody, ABO11605, All Western blottingAll lanes: Anti-KCNA4(ABO11605) at 0.5ug/mlLane 1: Rat Brain Tissue Lysate at 40ugLane 2: HY1080Whole Cell Lysate at 40ugLane 3: PANC Whole Cell Lysate at 40ugLane 4: U87 Whole Cell Lysate at 40ugLane 5: SHG Whole Cell Lysate at 40ugPredicted bind size: 70KDObserved bind size: 70KD



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