Product name:	KV1.5 Rabbit Polyclonal Antibody
Cat number:	ABN13161
Conjugate:	Unconjugated
Size:	100µL
Clone:	Polyclonal
Concentration:	1mg/ml
Host:	Rabbit
Isotype:	IgG
Immunogen:	The antiserum was produced against synthesized peptide derived from human KCNA5. AA range:253-302
Reactivity:	Human,Mouse,Rat
Applications:	WB 1:500-1:2000,IHC 1:50-1:300,ELISA 1:2000-1:20000
Molecular Weight:	68kDa
Purification:	Affinity purification
Form:	Liquid
Buffer:	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% New type preservative N.
Storage:	Store at 4°C short term. Aliquot and store at -20°C for 12 months. Avoid freeze/thaw cycles.

Background:

Potassium channels represent the most complex class of voltage-gated ino 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 homolog(s). This gene encodes a member of the potassium channel, voltage-gated, shaker-related subfamily. This member contains six membrane-spanning domains with a shaker-type repeat in the fourth segment. It belongs to the delayed rectifier class, the function of which could restore the resting membrane potential of beta cells after depolarization and thereby contribute to the regulation ofdisease:Defects in KCNA5 are the cause of atrial fibrillation familial type 7 (ATFB7) [MIM:612240]. Atrial fibrillation is a common disorder of cardiac rhythm that is hereditary in a small subgroup of patients. It is characterized by disorganized atrial electrical activity, progressive deterioration of atrial electromechanical function and ineffective pumping of blood into the ventricles. It can be associated with palpitations, syncope, thromboembolic stroke, and congestive heart failure.,domain:The amino terminus may be important in determining the rate of inactivation of the channel while the C-terminal PDZ-binding motif may play a role in modulation of channel activity and/or targeting of the channel to specific subcellular compartments.,domain:The segment S4 is probably the voltage-sensor and is characterized by a series of positively charged amino acids at every third position.,function:Mediates the voltage-dependent potassium ion permeability of excitable membranes. Assuming opened or closed conformations in response to the voltage difference across the membrane, the protein forms a potassium-selective channel through which potasssium ions may pass in accordance with their electrochemical gradient. May play a role in regulating the secretion of insulin in normal pancreatic islets. Isoform 2 exhibits a voltage-dependent recovery from inactivation and an excessive cumulative inactivation.,PTM:Sumoylated on Lys-221, and Lys-536, preferentially by SUMO3. Sumoylation regulates the voltage sensitivity of the channel.,similarity:Belongs to the potassium channel family. A (Shaker) subfamily.,subunit:Heterotetramer of potassium channel proteins. Interacts with DLG1, which enhances channel currents. Forms a ternary complex with DLG1 and CAV3 (By similarity). Interacts with UBE2I.,tissue specificity:Pancreatic islets and insulinoma.,