Product Name: KV1.5 Rabbit Polyclonal Antibody
Catalog #: APRab13161
For research use only.

Summary

Description	Rabbit polyclonal Antibody
Host	Rabbit
Application	WB,IHC,ELISA
Reactivity	Human,Mouse,Rat
Conjugation	Unconjugated
Modification	Unmodified
Isotype	IgG
Clonality	Polyclonal
Form	Liquid
Concentration	1mg/ml
Storage	Aliquot and store at -20°C (valid for 12 months). Avoid freeze/thaw cycles.
Shipping	Ice bags
Buffer	Liquid in PBS containing 50% glycerol, 0.5% protective protein and 0.02% New type preservative N.
Purification	Affinity purification

Application

Dilution Ratio	WB 1:500-1:2000,IHC 1:50-1:300,ELISA 1:2000-1:20000
Molecular Weight	68kDa

Antigen Information

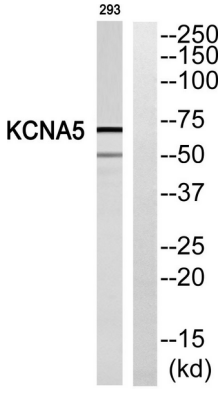
Gene Name	KCNA5
Alternative Names	KCNA5; Potassium voltage-gated channel subfamily A member 5; HPCN1; Voltage-gated potassium channel HK2; Voltage-gated potassium channel subunit Kv1.5
Gene ID	3741.0
SwissProt ID	P22460
Immunogen	The antiserum was produced against synthesized peptide derived from human KCNA5. AA range:253-302

Background

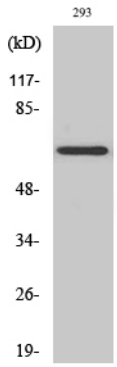
Potassium channels represent the most complex class of voltage-gated ino channels from both functional and structural standpoints. Their diverse functions include regulating neurotransmitter release, heart rate, insulin secretion, neuronal excitability, epithelial electrolyte transport, smooth muscle 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.,

Research Area

Image Data



Western blot analysis of KCNA5 Antibody. The lane on the right is blocked with the KCNA5 peptide.



Western Blot analysis of various cells using KV1.5 Polyclonal Antibody diluted at 1: 500