Product Name: KV1.1 Rabbit Polyclonal Antibody
Catalog #: APRab13159
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	57kDa

Antigen Information

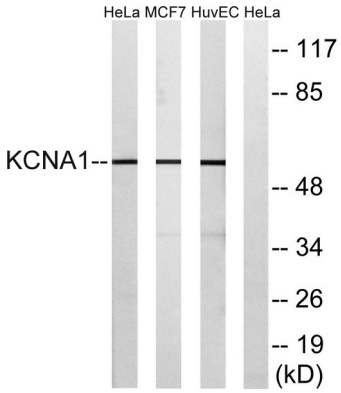
Gene Name	KCNA1
Alternative Names	KCNA1; Potassium voltage-gated channel subfamily A member 1; Voltage-gated K(+) channel HuKI; Voltage-gated potassium channel HBK1; Voltage-gated potassium channel subunit Kv1.1
Gene ID	3736.0
SwissProt ID	Q09470
Immunogen	The antiserum was produced against synthesized peptide derived from human KCNA1. AA range:256-305

Background

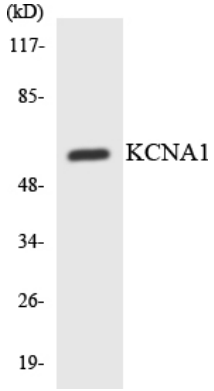
This gene encodes a voltage-gated delayed potassium channel that is phylogenetically related to the Drosophila Shaker channel. The encoded protein has six putative transmembrane segments (S1-S6), and the loop between S5 and S6 forms the pore and contains the conserved selectivity filter motif (GYGD). The functional channel is a homotetramer. The N-terminus of the channel is associated with beta subunits that can modify the inactivation properties of the channel as well as affect expression levels. The C-terminus of the channel is complexed to a PDZ domain protein that is responsible for channel targeting. Mutations in this gene have been associated with myokymia with periodic ataxia (AEMK). [provided by RefSeq, Jul 2008],disease:Defects in KCNA1 are the cause of episodic ataxia type 1 (EA1) [MIM:160120]; also known as paroxysmal or episodic ataxia with myokymia (EAM) or paroxysmal ataxia with neuromyotonia. EA1 is an autosomal dominant disorder characterized by brief episodes of ataxia and dysarthria. Neurological examination during and between the attacks demonstrates spontaneous, repetitive discharges in the distal musculature (myokymia) that arise from peripheral nerve. Nystagmus is absent.,disease:Defects in KCNA1 are the cause of myokymia isolated type 1 (MK1) [MIM:160120]. Myokymia is a condition characterized by spontaneous involuntary contraction of muscle fiber groups that can be observed as vermiform movement of the overlying skin. Electromyography typically shows continuous motor unit activity with spontaneous oligo- and multiplet-discharges of high intraburst frequency (myokymic discharges). Isolated spontaneous muscle twitches occur in many persons and have no grave significance.,domain:The N-terminus may be important in determining the rate of inactivation of the channel while the tail 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 potassium ions may pass in accordance with their electrochemical gradient.,PTM:Palmitoylated on Cys-243; which may be required for membrane targeting.,RNA editing:Partially edited. RNA editing varies from 17% in the caudate nucleus to 68% in the spinal cord and to 77% in the medulla.,similarity:Belongs to the potassium channel family. A (Shaker) subfamily.,subunit:Heterotetramer of potassium channel proteins. Binds KCNAB2 and PDZ domains of DLG1, DLG2 and DLG4.,

Research Area

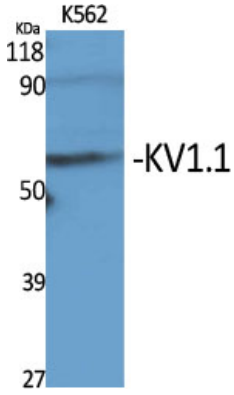
Image Data



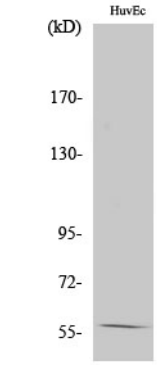
Western blot analysis of lysates from HUVEC, MCF-7, and HeLa cells, using KCNA1 Antibody. The lane on the right is blocked with the synthesized peptide.



Western blot analysis of the lysates from HepG2 cells using KCNA1 antibody.



Western Blot analysis of various cells using KV1.1 Polyclonal Antibody diluted at 1:2000



Western Blot analysis of HeLa cells using KV1.1 Polyclonal Antibody diluted at 1:2000