KV1.1 Rabbit pAb

CatalogNo: YT2505

Key Features

Host Species	Reactivity	Applications
• Rabbit	• Human,Mouse,Rat	• WB,ELISA,IHC

MW	Isotype
• 57kD (Observed)	• IgG

Recommended Dilution Ratios

WB 1:500-2000
IHC 1:50-300
ELISA 1:2000-20000

Storage

Storage*	-15°C to -25°C/1 year(Do not lower than -25°C)
Formulation	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.

Basic Information

Clonality	Polyclonal

Immunogen Information

Immunogen	The antiserum was produced against synthesized peptide derived from human KCNA1. AA range:256-305
Specificity	KV1.1 Polyclonal Antibody detects endogenous levels of KV1.1 protein.

Target Information

Gene name KCNA1

Protein Name Potassium voltage-gated channel subfamily A member 1

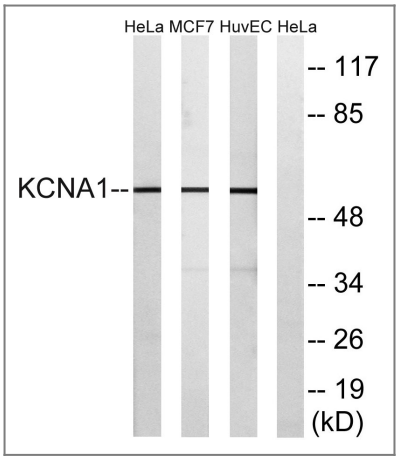
Organism	Gene ID	UniProt ID
Human	3736;	Q09470;
Mouse	16485;	P16388;
Rat	24520;	P10499;

Cellular Localization Cell membrane ; Multi-pass membrane protein . Membrane . Cell projection, axon . Cytoplasmic vesicle . Perikaryon . Endoplasmic reticulum . Cell projection, dendrite . Cell junction . Cell junction, synapse . Cell junction, synapse, presynaptic cell membrane . Cell junction, synapse, presynapse . Homotetrameric KCNA1 is primarily located in the endoplasmic reticulum. Interaction with KCNA2 and KCNAB2 or with KCNA4 and KCNAB2 promotes expression at the cell membrane (By similarity). .

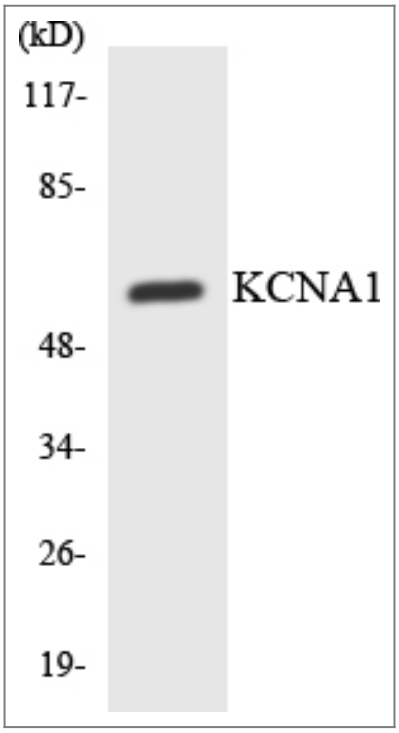
Tissue specificity Detected adjacent to nodes of Ranvier in juxtaparanodal zones in spinal cord nerve fibers, but also in paranodal regions in some myelinated spinal cord axons (at protein level) (PubMed:11086297). Detected in the islet of Langerhans (PubMed:21483673).

Function 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.,

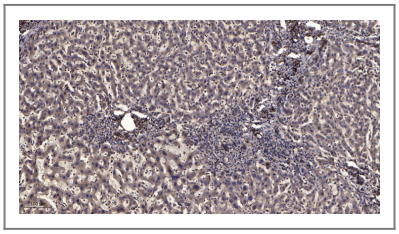
Validation Data



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.



Immunohistochemical analysis of paraffin-embedded human liver cancer. 1, Antibody was diluted at 1:200(4° overnight). 2, Tris-EDTA,pH9.0 was used for antigen retrieval. 3,Secondary antibody was diluted at 1:200(room temperature, 45min).

Contact information

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Please scan the QR code to access additional product information:
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