Product Name: KCNQ4 Rabbit Polyclonal Antibody
Catalog #: APRab12948
For research use only.

Summary

Description	Rabbit polyclonal Antibody
Host	Rabbit
Application	WB,IHC,ELISA
Reactivity	Human,Mouse
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	80kDa

Antigen Information

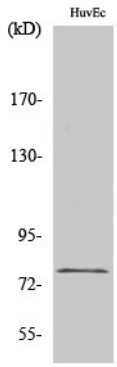
Gene Name	KCNQ4
Alternative Names	KCNQ4; Potassium voltage-gated channel subfamily KQT member 4; KQT-like 4; Potassium channel subunit alpha KvLQT4; Voltage-gated potassium channel subunit Kv7.4
Gene ID	9132.0
SwissProt ID	P56696
Immunogen	The antiserum was produced against synthesized peptide derived from human KCNQ4. AA range:644-693

Background

The protein encoded by this gene forms a potassium channel that is thought to play a critical role in the regulation of neuronal excitability, particularly in sensory cells of the cochlea. The current generated by this channel is inhibited by M1 muscarinic acetylcholine receptors and activated by retigabine, a novel anti-convulsant drug. The encoded protein can form a homomultimeric potassium channel or possibly a heteromultimeric channel in association with the protein encoded by the KCNQ3 gene. Defects in this gene are a cause of nonsyndromic sensorineural deafness type 2 (DFNA2), an autosomal dominant form of progressive hearing loss. Two transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Jul 2008],alternative products:Additional isoforms seem to exist,disease:Defects in KCNQ4 are the cause of non-syndromic sensorineural deafness autosomal dominant type 2 (DFNA2A) [MIM:600101]. DFNA2A is a form of sensorineural hearing loss. Sensorineural deafness results from damage to the neural receptors of the inner ear, the nerve pathways to the brain, or the area of the brain that receives sound information.,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:Probably important in the regulation of neuronal excitability. May underlie a potassium current involved in regulating the excitability of sensory cells of the cochlea. KCNQ4 channels are blocked by linopirdin, XE991 and bepridil, whereas clofilium is without significant effect. Muscarinic agonist oxotremorine-M strongly suppress KCNQ4 current in CHO cells in which cloned KCNQ4 channels were coexpressed with M1 muscarinnic receptors.,miscellaneous:Mutagenesis experiments were carried out by expressing in Xenopus oocytes KCNQ4 mutants either individually (homomultimers) or in combination with wild-type KCNQ4 (mut/wt homomultimers) in a ratio of 1:1, to mimic the situation in a heterozygous DFNA2 patient.,online information:Gene page,similarity:Belongs to the potassium channel family. KQT subfamily.,subcellular location:Situated at the basal membrane of cochlear outer hair cells.,subunit:May form heteromultimers with KCNQ3.,tissue specificity:Expressed in the outer, but not the inner, sensory hair cells of the cochlea. Slightly expressed in heart, brain and skeletal muscle.,

Research Area

Image Data



Western Blot analysis of various cells using KCNQ4 Polyclonal Antibody