Product Name: T-type Ca++ CP α1H Rabbit Polyclonal Antibody
Catalog #: APRab19413

Summary

Production Name	T-type Ca++ CP α1H Rabbit Polyclonal Antibody
Description	Rabbit Polyclonal Antibody
Host	Rabbit
Application	WB,ELISA
Reactivity	Human,Mouse,Rat

Performance

Conjugation	Unconjugated
Modification	Unmodified
Isotype	IgG
Clonality	Polyclonal
Form	Liquid
Storage	Store at 4°C short term. Aliquot and store at -20°C long term. Avoid freeze/thaw cycles.
Buffer	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% New type preservative N.
Purification	Affinity purification

Immunogen

Gene Name	CACNA1H
Alternative Names	CACNA1H; Voltage-dependent T-type calcium channel subunit alpha-1H; Low-voltage-activated calcium channel alpha1 3.2 subunit; Voltage-gated calcium channel subunit alpha Cav3.2
Gene ID	8912.0
SwissProt ID	O95180.The antiserum was produced against synthesized peptide derived from human CACNA1H. AA range:462-511

Application

Dilution Ratio	WB 1:500 - 1:2000. ELISA: 1:10000. Not yet tested in other applications.
Molecular Weight	259kD

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Background

calcium voltage-gated channel subunit alpha1 H(CACNA1H) Homo sapiens This gene encodes a T-type member of the alpha-1 subunit family, a protein in the voltage-dependent calcium channel complex. Calcium channels mediate the influx of calcium ions into the cell upon membrane polarization and consist of a complex of alpha-1, alpha-2/delta, beta, and gamma subunits in a 1:1:1:1 ratio. The alpha-1 subunit has 24 transmembrane segments and forms the pore through which ions pass into the cell. There are multiple isoforms of each of the proteins in the complex, either encoded by different genes or the result of alternative splicing of transcripts. Alternate transcriptional splice variants, encoding different isoforms, have been characterized for the gene described here. Studies suggest certain mutations in this gene lead to childhood absence epilepsy (CAE). [provided by RefSeq, Jul 2008],disease:Defects in CACNA1H are a cause of susceptibility to idiopathic generalized epilepsy type 6 (IGE6) [MIM:611942]. IGE is characterized by recurring generalized seizures in the absence of detectable brain lesions and/or metabolic abnormalities. Generalized seizures arise diffusely and simultaneously from both hemispheres of the brain. IGE6 is a polygenic and multifactorial disease.,domain:Each of the four internal repeats contains five hydrophobic transmembrane segments (S1, S2, S3, S5, S6) and one positively charged transmembrane segment (S4). S4 segments probably represent the voltage-sensor and are characterized by a series of positively charged amino acids at every third position.,function:Voltage-sensitive calcium channels (VSCC) mediate the entry of calcium ions into excitable cells and are also involved in a variety of calcium-dependent processes, including muscle contraction, hormone or neurotransmitter release, gene expression, cell motility, cell division and cell death. The isoform alpha-1H gives rise to T-type calcium currents. T-type calcium channels belong to the "low-voltage activated (LVA)" group and are strongly blocked by nickel and mibefradil. A particularity of this type of channels is an opening at quite negative potentials, and a voltage-dependent inactivation. T-type channels serve pacemaking functions in both central neurons and cardiac nodal cells and support calcium signaling in secretory cells and vascular smooth muscle. They may also be involved in the modulation of firing patterns of neurons which is important for information processing as well as in cell growth processes.,PTM:In response to raising of intracellular calcium, the T-type channels are activated by CaM-kinase II.,similarity:Belongs to the calcium channel alpha-1 subunit (TC 1.A.1.11) family.,tissue specificity:Expressed in kidney, liver, heart, brain. Isoform 2 seems to be testis-specific.,

Research Area

MAPK_ERK_Growth;MAPK_G_Protein;Calcium;

Image Data

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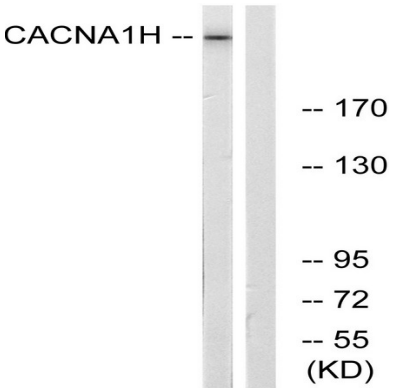
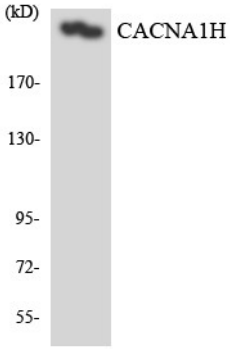
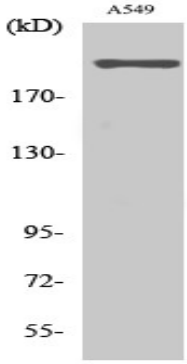


Western blot analysis of lysates from A549 cells, using CACNA1H Antibody. The lane on the right is blocked with the synthesized peptide.



Western blot analysis of the lysates from HeLa cells using CACNA1H antibody.



Western Blot analysis of various cells using T-type Ca++ CP α1H Polyclonal Antibody. Secondary antibody was diluted at 1:20000

Note

For research use only.