

CACNA1H Rabbit pAb

CatalogNo: YT4773 Orthogonal Validated 

Key Features

Host Species

- Rabbit

Reactivity

- Human, Mouse, Rat

Applications

- WB, ELISA

MW

- 259kD (Observed)

Isotype

- IgG

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.

Recommended Dilution Ratios

WB 1:500-1:2000

ELISA 1:10000

Not yet tested in other applications.

Basic Information

Clonality Polyclonal

Immunogen Information

Immunogen The antiserum was produced against synthesized peptide derived from human CACNA1H. AA range: 462-511

Specificity T-type Ca⁺⁺ CP α 1H Polyclonal Antibody detects endogenous levels of T-type Ca⁺⁺ CP α 1H protein.

Target Information

Gene name CACNA1H

Protein Name Voltage-dependent T-type calcium channel subunit alpha-1H

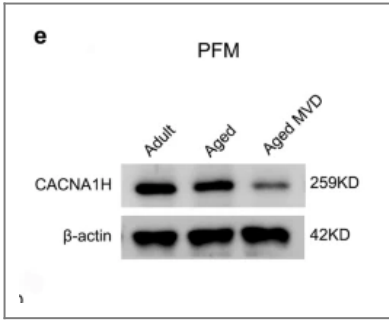
Organism	Gene ID	UniProt ID
Human	8912 ;	O95180 ;
Mouse		O88427 ;
Rat	114862 ;	Q9EQ60 ;

Cellular Localization Cell membrane ; Multi-pass membrane protein . Interaction with STAC increases expression at the cell membrane. .

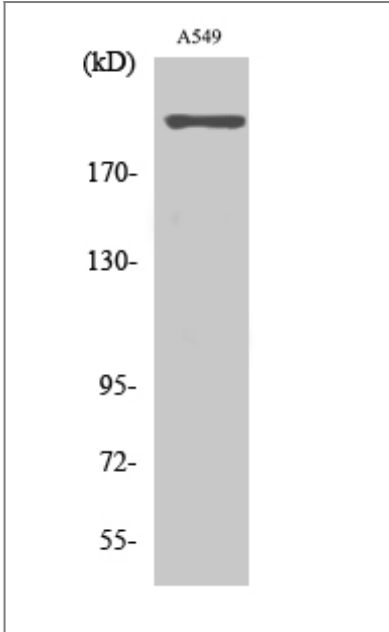
Tissue specificity Expressed in the adrenal glomerulosa (at protein level) (PubMed:25907736, PubMed:27729216). In nonneuronal tissues, the highest expression levels are found in the kidney, liver, and heart. In the brain, most abundant in the amygdala, caudate nucleus, and putamen (PubMed:9670923, PubMed:9930755). In the heart, expressed in blood vessels. ; [Isoform 1]: Expressed in testis, primarily in the germ cells, but not in other portions of the reproductive tract, such as ductus deferens (PubMed:11751928). Expressed in the brain (PubMed:11751928). ; [Isoform 2]: Expressed in testis, primarily in the germ cells, but not in other portions of the reproductive tract, such as ductus deferens (PubMed:11751928). Not expressed in the brain (PubMed:11751928).

Function Disease:Defects in CACNA1H are a cause of susceptibility to idiopathic generalized epilepsy type 6 (IGE6) [MIM:611942]. IGE6 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.,

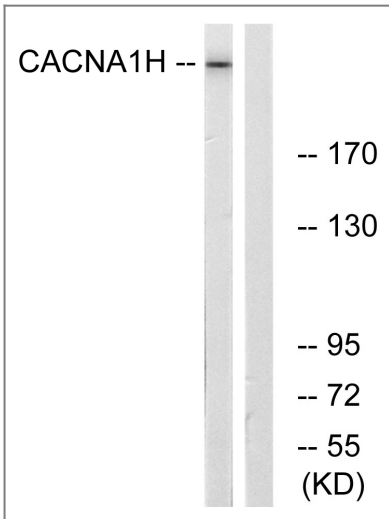
Validation Data



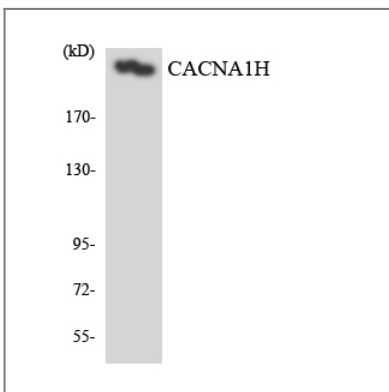
Li, S., Hao, M., Li, B. et al. CACNA1H downregulation induces skeletal muscle atrophy involving endoplasmic reticulum stress activation and autophagy flux blockade. *Cell Death Dis* 11, 279 (2020).



Western Blot analysis of various cells using T-type Ca^{++} CP α 1H Polyclonal Antibody. Secondary antibody(catalog#:R50002) was diluted at 1:20000



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.

| Contact information

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Please scan the QR code to access additional product information:
CACNA1H Rabbit pAb

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