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CACNA1H Antibody
Catalog # ASC11871

Specification

CACNA1H Antibody - Product Information

Application	**IF**
Primary Accession	O95180
Other Accession	NP_066921, 8912
Reactivity	**Human, Mouse, Rat**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**IgG**
Calculated MW	**Predicted: 259 kDa** **Observed: 260 kDa KDa**
Application Notes	**CACNA1H antibody can be used for detection of CACNA1H by Western blot at 1 - 2 µg/ml. Antibody can also be used for immunohistochemistry starting at 5 µg/mL. For immunofluorescence start at 20 µg/mL.**

CACNA1H Antibody - Additional Information

Gene ID **8912**

Target/Specificity
CACNA1H antibody was raised against a 16 amino acid peptide near the center of human CACNA1H.

The immunogen is located within amino acids 1010 - 1060 of CACNA1H.

Reconstitution & Storage
CACNA1H antibody can be stored at 4℃ for three months and -20℃, stable for up to one year.

Precautions
CACNA1H Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

CACNA1H Antibody - Protein Information

Name CACNA1H (HGNC:1395)

Function
Voltage-sensitive calcium channel that gives rise to T-type calcium currents. T-type calcium channels belong to the 'low-voltage activated (LVA)' group. A particularity of this type of channel is an opening at quite negative potentials, and a voltage-dependent inactivation (PubMed:9670923, PubMed:9930755, PubMed:27149520). 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 (Probable). They may also be

involved in the modulation of firing patterns of neurons (PubMed:15048902). In the adrenal zona glomerulosa, participates in the signaling pathway leading to aldosterone production in response to either AGT/angiotensin II, or hyperkalemia (PubMed:25907736, PubMed:27729216).

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

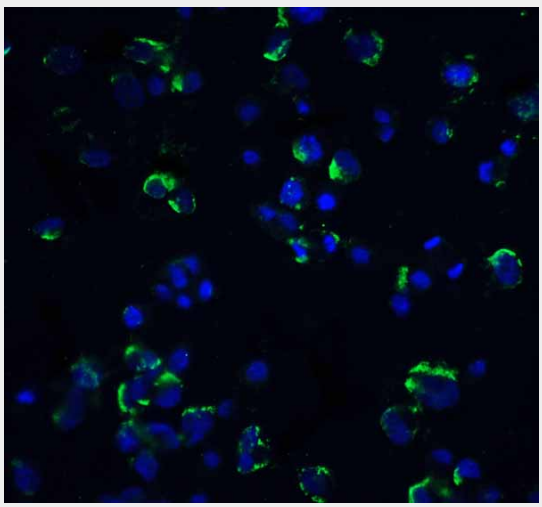
Tissue Location
Expressed in the adrenal glomerulosa (at protein level) (PubMed:25907736, PubMed:27729216). In nonneuronal tissues, the highest expression levels are found in the kidney, liver, and heart. In the brain, most abundant in the amygdala, caudate nucleus, and putamen (PubMed:9670923, PubMed:9930755). In the heart, expressed in blood vessels. [Isoform 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).

CACNA1H Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

CACNA1H Antibody - Images



Immunofluorescence of NIK in 293 cells with NIK antibody at 10 µg/ml.

CACNA1H Antibody - Background

The calcium channel protein CACNA1H is a T-type member of the alpha-1 subunit family that is

part of the voltage-dependent calcium channel complex which mediates the influx of calcium ions into the cell upon membrane polarization (1,2). CACNA1H is a subunit of Cav3.2 T-type calcium channel that is involved in neurological disorders such as epilepsy and pain (2,3). CACNA1H associates with the caveolin protein Cav-3 and it is thought that Cav-3 regulates the Protein Kinase A (PKA) modulation of CACNA1H-containing Cav3.2 T-type calcium channels (4).

CACNA1H Antibody - References

Cribbs LL, Lee JH, Yang J, et al. Cloning and characterization of alpha1H from human heart, a member of the T-type CA2+ channel gene family. Circ. Res. 1998; 83:103-9.
Sekiguchi F and Kawabata A. T-type calcium channels: functional regulation and implication in pain signaling. J. Pharmacol. Sci. 2013; 122:244-50.
McGivern JG. Targeting N-type and T-type calcium channels for the treatment of pain. Drug Discov. Today 2006; 11:245-53.
Markandeya YS, Fahey JM, Pluteanu F, et al. Caveolin-3 regulates protein kinase A modulation of the Cav3.2 (a1H) T-type Ca2+ channels. J. Biol. Chem. 2011; 286:2433-2444.