abcam

Product datasheet

Anti-CACNA1H antibody [N55/10] ab84815

2 References 2 Images

Overview

Product name	Anti-CACNA1H antibody [N55/10]
Description	Mouse monoclonal [N55/10] to CACNA1H
Host species	Mouse
Specificity	No cross-reactivity against Cav1.3 and Cav3.1
Tested applications	**Suitable for:** IHC-P, WB, IHC-Fr
Species reactivity	**Reacts with:** Mouse, Rat, Human
Immunogen	Fusion protein corresponding to Human CACNA1H aa 1000-1300. Database link: **O95180**
Positive control	IHC-P: Human hippocampus tissue. IHC-Fr: Frozen human brain tissue.
General notes	The clone number has been updated from S55-10 to N55/10, both clone numbers name the same antibody clone. The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing. If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Upon delivery aliquot and store at -20°C. Avoid repeated freeze / thaw cycles.
Storage buffer	Preservative: 0.09% Sodium azide Constituents: 50% Glycerol (glycerin, glycerine), PBS
Purity	Protein G purified
Clonality	Monoclonal
Clone number	N55/10
Isotype	IgG1

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab84815 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
IHC-P		1/1000.
WB		1/1000. Predicted molecular weight: 259 kDa.
IHC-Fr		1/1000.

Target

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.

Tissue specificity Expressed in kidney, liver, heart, brain. Isoform 2 seems to be testis-specific.

Involvement in 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.

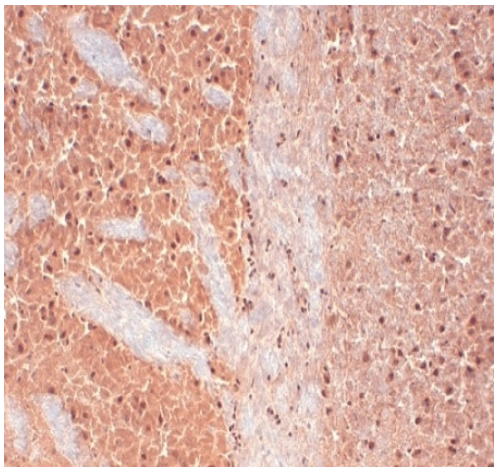
Sequence similarities Belongs to the calcium channel alpha-1 subunit (TC 1.A.1.11) family. CACNA1H subfamily.

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.

Post-translational modifications In response to raising of intracellular calcium, the T-type channels are activated by CaM-kinase II.

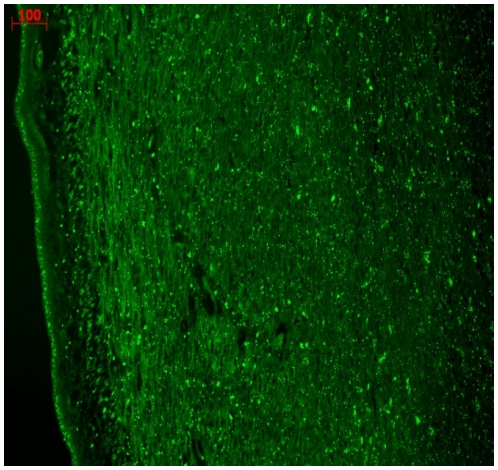
Cellular localization Membrane.

Images



Immunohistochemistry (Frozen sections) - Anti-CACNA1H antibody [N55/10] (ab84815)

Immunohistochemical analysis of frozen Human brain tissue sections staining CACNA1H. Samples were fixed with 10% Formalin solution and incubated with primary antibody at 1:1000 dilution for 1 hour at room temperature. A biotinylated goat anti-mouse was used as the secondary antibody. Mayer Hematoxylin was used as a nuclear stain.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CACNA1H antibody [N55/10] (ab84815)

Immunohistochemical analysis (Formalin/PFA-fixed paraffin-embedded sections) of human hippocampus tissue labelling CACNA1H with ab84815 at 1:1000 dilution, followed by secondary antibody Goat anti-mouse (green) at 1:50 for 1 hour at RT.

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