

Anti-CACNA1C Picoband Antibody
Catalog # ABO12058**Specification**

Anti-CACNA1C Picoband Antibody - Product Information

Application	WB
Primary Accession	Q13936
Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Format	Lyophilized

Description

Rabbit IgG polyclonal antibody for Voltage-dependent L-type calcium channel subunit alpha-1C(CACNA1C) detection. Tested with WB in Human;Mouse;Rat.

Reconstitution

Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Anti-CACNA1C Picoband Antibody - Additional Information

Gene ID 775

Other Names

Voltage-dependent L-type calcium channel subunit alpha-1C, Calcium channel, L type, alpha-1 polypeptide, isoform 1, cardiac muscle, Voltage-gated calcium channel subunit alpha Cav1.2, CACNA1C, CACH2, CACN2, CACNL1A1, CCHL1A1

Calculated MW

248977 MW KDa

Application Details

Western blot, 0.1-0.5 µg/ml, Mouse, Rat, Human

Subcellular Localization

Membrane; Multi-pass membrane protein. Cell membrane . The interaction between RRAD and CACNB2 regulates its trafficking to the cell membrane. .

Tissue Specificity

Expressed in brain, heart, jejunum, ovary, pancreatic beta-cells and vascular smooth muscle. Overall expression is reduced in atherosclerotic vascular smooth muscle. .

Protein Name

Voltage-dependent L-type calcium channel subunit alpha-1C

Contents

Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg NaN3.

Immunogen

E.coli-derived human CACNA1C recombinant protein (Position: E1933-H2026). Human CACNA1C

shares 88.3% amino acid (aa) sequence identity with both mouse and rat CACNA1C.

Purification

Immunogen affinity purified.

Cross Reactivity

No cross reactivity with other proteins.

Storage

At -20°C for one year. After r°Constitution, at 4°C for one month. It°Can also be aliquotted and stored frozen at -20°C for a longer time.Avoid repeated freezing and thawing.

Sequence Similarities

Belongs to the calcium channel alpha-1 subunit (TC 1.A.1.11) family. CACNA1C subfamily.

Anti-CACNA1C Picoband Antibody - Protein Information

Name CACNA1C

Synonyms CACH2, CACN2, CACNL1A1, CCHL1A1

Function

Pore-forming, alpha-1C subunit of the voltage-gated calcium channel that gives rise to L-type calcium currents (PubMed:8392192, PubMed:7737988, PubMed:9087614, PubMed:9013606, PubMed:9607315, PubMed:12176756, PubMed:17071743, PubMed:11741969, PubMed:8099908, PubMed:12181424, PubMed:29078335, PubMed:29742403, PubMed:16299511, PubMed:20953164, PubMed:15454078, PubMed:15863612, PubMed:17224476, PubMed:24728418, PubMed:26253506, PubMed:27218670, PubMed:23677916, PubMed:30023270, PubMed:30172029, PubMed:34163037). Mediates influx of calcium ions into the cytoplasm, and thereby triggers calcium release from the sarcoplasm (By similarity). Plays an important role in excitation-contraction coupling in the heart. Required for normal heart development and normal regulation of heart rhythm (PubMed:15454078, PubMed:15863612, PubMed:17224476, PubMed:24728418).

target="_blank">24728418, PubMed:26253506). Required for normal contraction of smooth muscle cells in blood vessels and in the intestine. Essential for normal blood pressure regulation via its role in the contraction of arterial smooth muscle cells (PubMed:28119464). Long-lasting (L-type) calcium channels belong to the 'high-voltage activated' (HVA) group (Probable).

Cellular Location

Cell membrane; Multi-pass membrane protein Cell membrane, sarcolemma {ECO:0000250|UniProtKB:P15381}; Multi-pass membrane protein. Perikaryon {ECO:0000250|UniProtKB:P22002}. Postsynaptic density membrane {ECO:0000250|UniProtKB:P22002}. Cell projection, dendrite {ECO:0000250|UniProtKB:P22002}. Cell membrane, sarcolemma, T-tubule {ECO:0000250|UniProtKB:Q01815}. Note=Colocalizes with ryanodine receptors in distinct clusters at the junctional membrane, where the sarcolemma and the sarcoplasmic reticulum are in close contact. The interaction between RRAD and CACNB2 promotes the expression of CACNA1C at the cell membrane. {ECO:0000250|UniProtKB:P15381}

Tissue Location

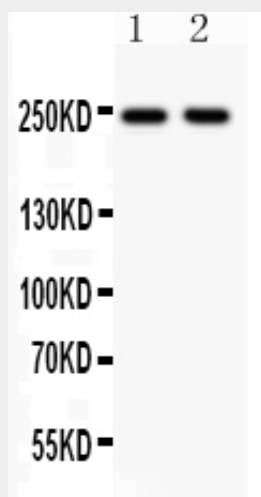
Detected throughout the brain, including hippocampus, cerebellum and amygdala, throughout the heart and vascular system, including ductus arteriosus, in urinary bladder, and in retina and sclera in the eye (PubMed:15454078). Expressed in brain, heart, jejunum, ovary, pancreatic beta-cells and vascular smooth muscle Overall expression is reduced in atherosclerotic vascular smooth muscle.

Anti-CACNA1C Picoband 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 Cytometry](#)
- [Cell Culture](#)

Anti-CACNA1C Picoband Antibody - Images



Anti- CACNA1C Picoband antibody, ABO12058, Western blottingAll lanes: Anti CACNA1C (ABO12058) at 0.5ug/mlLane 1: Rat Brain Tissue Lysate at 50ugLane 2: Mouse Cardiac Muscle Tissue Lysate at 50ugPredicted bind size: 249KDObserved bind size: 249KD

Anti-CACNA1C Picoband Antibody - Background

CACNA1C is also known as TS, LQT8, CACH2, CACN2, CaV1.2, CCHL1A1, CACNL1A1. It is mapped to 12p13.3. This gene encodes an alpha-1 subunit of a voltage-dependent calcium channel. Calcium channels mediate the influx of calcium ions into the cell upon membrane polarization. The alpha-1 subunit consists of 24 transmembrane segments and forms the pore through which ions pass into the cell. The calcium channel consists of a complex of alpha-1, alpha-2/delta and beta subunits in a 1:1:1 ratio. The protein encoded by this gene binds to and is inhibited by dihydropyridine. Alternative splicing results in many transcript variants encoding different proteins. Some of the predicted proteins may not produce functional ion channel subunits.