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Anti-Cav1.2 Antibody

Catalog # AP59918

Product Information

Application	WB, IF/IC
Primary Accession	Q13936
Reactivity	Human, Mouse, Rat, Rabbit
Host	Rabbit
Clonality	Polyclonal
Calculated MW	248977

Additional Information

Gene ID	775
Other Names	CACH2; CACN2; CACNL1A1; CCHL1A1; 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
Target/Specificity	KLH-conjugated synthetic peptide encompassing a sequence within the center region of human Cav1.2. The exact sequence is proprietary.
Dilution	WB~~WB (1/500 - 1/1000) IF/IC~~N/A
Format	Liquid in 0.42% Potassium phosphate, 0.87% Sodium chloride, pH 7.3, 30% glycerol, and 0.01% sodium azide.
Storage	Store at -20 °C.Stable for 12 months from date of receipt

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:12181424, PubMed:15454078, PubMed:15863612, PubMed:16299511, PubMed:17224476, PubMed:20953164, PubMed:23677916, PubMed:24728418, PubMed:26253506, PubMed:27218670, PubMed:29078335, PubMed:29742403, PubMed:30023270, PubMed:30172029, PubMed:34163037, PubMed:8099908). 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, 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).

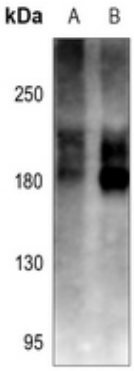
Cellular Location

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}

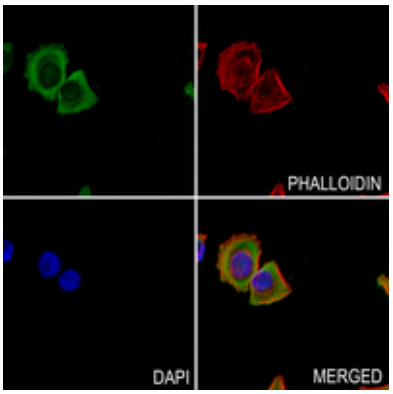
Tissue Location

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.

Images



Western blot analysis of Cav1.2 expression in mouse brain (A), rat brain (B) whole cell lysates. (Predicted band size: 248 kD; Observed band size: 190 kD)



Immunofluorescent analysis of Cav1.2 staining in MCF7 cells. Formalin-fixed cells were permeabilized with 0.1% Triton X-100 in TBS for 5-10 minutes and blocked with 3% BSA-PBS for 30 minutes at room temperature. Cells were probed with the primary antibody in 3% BSA-PBS and incubated overnight at 4 °C in a hidified chamber. Cells were washed with PBST and incubated with a AF488-conjugated secondary antibody (green) in PBS at room temperature in the dark. Phalloidin - AF594 was used to stain Actin filaments (red). DAPI was used to stain the cell nuclei (blue).

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.