

## Cav (pan) $\alpha$ 1 Rabbit pAb

CatalogNo: YN5644

### Key Features

**Host Species**

- Rabbit

**Reactivity**

- Human,Rat,Mouse

**Applications**

- IHC,IF

**MW**

- 160-240kD (Observed)

**Isotype**

- IgG

### Recommended Dilution Ratios

**IHC 1:100-200****IF 1:50-200**

### 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.

### Basic Information

**Clonality**

Polyclonal

### Immunogen Information

**Immunogen**Synthetic Peptide of Cav pan  $\alpha$ 1 AA range: 1288-1338**Specificity**Cav pan  $\alpha$ 1 protein(A211) detects endogenous levels of Cav pan  $\alpha$ 1

### Target Information

**Gene name**

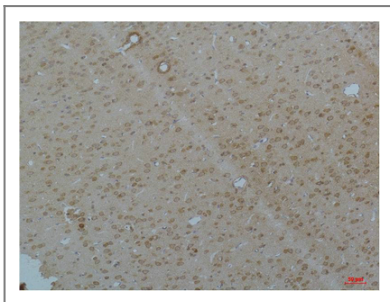
CACNA1C

<b>Protein Name</b>	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)		
	<b>Organism</b>	<b>Gene ID</b>	<b>UniProt ID</b>
	Human	<a href="#">775;</a>	<a href="#">Q13936;</a>
	Mouse		<a href="#">Q01815;</a>
	Rat		<a href="#">P22002;</a>
<b>Cellular Localization</b>	Cell membrane ; Multi-pass membrane protein . Cell membrane, sarcolemma ; Multi-pass membrane protein . Perikaryon . Cell junction, synapse, postsynaptic density membrane . Cell projection, dendrite . Cell membrane, sarcolemma, T-tubule . 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. .		
<b>Tissue specificity</b>	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.		

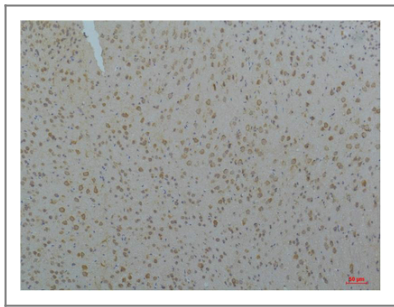
## Function

Alternative products: Additional isoforms seem to exist. Exons 8A, 21, 22, 31, 32, 33, 40B, 43A, 41A and 45 are alternatively spliced in a variety of combinations. Experimental confirmation may be lacking for some isoforms. Disease: Defects in CACNA1C are the cause of Brugada syndrome type 3 (BRS3) [MIM:611875]. BRS3 is a heart disease characterized by the association of Brugada syndrome with shortened QT intervals. Brugada syndrome is a tachyarrhythmia characterized by right bundle branch block and ST segment elevation on an electrocardiogram (ECG). It can cause the ventricles to beat so fast that the blood is prevented from circulating efficiently in the body. When this situation occurs (called ventricular fibrillation), the individual will faint and may die in a few minutes if the heart is not reset. Disease: Defects in CACNA1C are the cause of Timothy syndrome (TS) [MIM:601005]. TS is a disorder characterized by multiorgan dysfunction including lethal arrhythmias, webbing of fingers and toes, congenital heart disease, immune deficiency, intermittent hypoglycemia, cognitive abnormalities and autism. Domain: Binding of intracellular calcium through the EF-hand motif inhibits the opening of the channel. 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-1C gives rise to L-type calcium currents. Long-lasting (L-type) calcium channels belong to the 'high-voltage activated' (HVA) group. They are blocked by dihydropyridines (DHP), phenylalkylamines, benzothiazepines, and by omega-agatoxin-IIIa (omega-Aga-IIIa). They are however insensitive to omega-conotoxin-GVIA (omega-CTx-GVIA) and omega-agatoxin-IVA (omega-Aga-IVA). Calcium channels containing the alpha-1C subunit play an important role in excitation-contraction coupling in the heart. The various isoforms display marked differences in the sensitivity to DHP compounds. PTM: Phosphorylation by PKA activates the channel. Similarity: Belongs to the calcium channel alpha-1 subunit (TC 1.A.1.11) family. Subunit: Voltage-dependent calcium channels are multisubunit complexes, consisting of alpha-1, alpha-2, beta and delta subunits in a 1:1:1:1 ratio. The channel activity is directed by the pore-forming and voltage-sensitive alpha-1 subunit. In many cases, this subunit is sufficient to generate voltage-sensitive calcium channel activity. The auxiliary subunits beta and alpha-2/delta linked by a disulfide bridge regulate the channel activity. Interacts with CACNA2D4. Tissue specificity: Expressed in brain, heart, jejunum, ovary, pancreatic beta-cells and vascular smooth muscle. Overall expression is reduced in atherosclerotic vascular smooth muscle.

## Validation Data



Immunohistochemical analysis of paraffin-embedded Rat Brain Tissue using Cav pan α1 Rabbit pAb diluted at 1:200.



Immunohistochemical analysis of paraffin-embedded Mouse Brain Tissue using Cav pan α1 Rabbit pAb diluted at 1:200.

## **| Contact information**

Orders: [order@immunoway.com](mailto:order@immunoway.com)  
Support: [tech@immunoway.com](mailto:tech@immunoway.com)  
Telephone: 877-594-3616 (Toll Free), 408-747-0185  
Website: <http://www.immunoway.com>  
Address: 2200 Ringwood Ave San Jose, CA 95131 USA



Please scan the QR code to access additional product information:  
**Cav (pan) α1 Rabbit pAb**

---

For Research Use Only. Not for Use in Diagnostic Procedures.

[Antibody](#) | [ELISA Kits](#) | [Protein](#) | [Reagents](#)