

## Cav pan $\alpha$ 1 Polyclonal Antibody

<b>Catalog No :</b>	YN5644
<b>Reactivity :</b>	Human;Rat;Mouse
<b>Applications :</b>	IHC;IF
<b>Target :</b>	Cav pan $\alpha$ 1
<b>Fields :</b>	>>MAPK signaling pathway;>>Calcium signaling pathway;>>cGMP-PKG signaling pathway;>>cAMP signaling pathway;>>Cardiac muscle contraction;>>Adrenergic signaling in cardiomyocytes;>>Vascular smooth muscle contraction;>>Circadian entrainment;>>Long-term potentiation;>>Retrograde endocannabinoid signaling;>>Glutamatergic synapse;>>Cholinergic synapse;>>Serotonergic synapse;>>GABAergic synapse;>>Dopaminergic synapse;>>Taste transduction;>>Insulin secretion;>>GnRH signaling pathway;>>Oxytocin signaling pathway;>>Renin secretion;>>Aldosterone synthesis and secretion;>>Cortisol synthesis and secretion;>>GnRH secretion;>>Type II diabetes mellitus;>>Cushing syndrome;>>Growth hormone synthesis, secretion and action;>>Alzheimer disease;>>Prion disease;>>Pathways of neurodegeneration - multiple diseases;>>Amphetamine addiction;>>Chemical carcinogenesis - receptor activation;>>Hypertrophic cardiomyopathy;>>Arrhythmogenic right ventricular cardiomyopathy;>>Dilated cardiomyopathy
<b>Gene Name :</b>	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>Human Gene Id :</b>	775
<b>Human Swiss Prot No :</b>	Q13936
<b>Mouse Swiss Prot No :</b>	Q01815
<b>Rat Swiss Prot No :</b>	P22002
<b>Immunogen :</b>	Synthetic Peptide of Cav pan $\alpha$ 1 AA range: 1288-1338

<b>Specificity :</b>	<u>Cav pan <math>\alpha</math>1 protein(A211) detects endogenous levels of Cav pan <math>\alpha</math>1</u>
<b>Formulation :</b>	<u>Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.</u>
<b>Source :</b>	<u>Polyclonal, Rabbit,IgG</u>
<b>Dilution :</b>	<u>IHC 1:100-200. IF 1:50-200</u>
<b>Purification :</b>	<u>The antibody was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific immunogen.</u>
<b>Concentration :</b>	<u>1 mg/ml</u>
<b>Storage Stability :</b>	<u>-15°C to -25°C/1 year(Do not lower than -25°C)</u>
<b>Observed Band :</b>	<u>160-240kD</u>
<b>Cell Pathway :</b>	<u>MAPK_ERK_Growth;MAPK_G_Protein;Calcium;Cardiac muscle contraction;Vascular smooth muscle contraction;Long-term potentiation;GnRH;Type II diabetes mellitus;Alzheimer's disease;Hypertrophic cardiomyopat</u>
<b>Background :</b>	<u>calcium voltage-gated channel subunit alpha1 C(CACNA1C) Homo sapiens 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, beta, and gamma subunits in a 1:1:1:1 ratio. There are multiple isoforms of each of these proteins, either encoded by different genes or the result of alternative splicing of transcripts. 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. [provided by RefSeq, Oct 2012],</u>
<b>Function :</b>	<u>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</u>

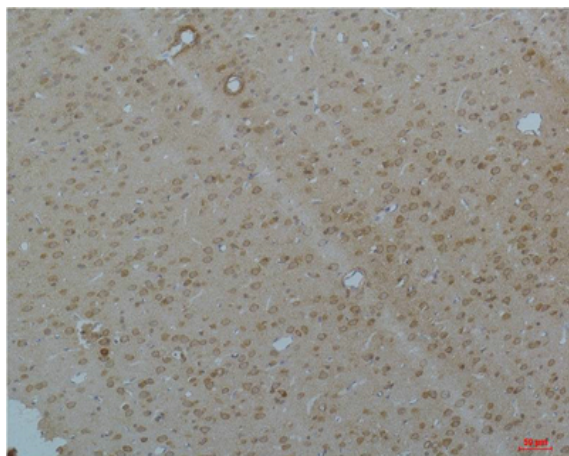
**Subcellular Location :**

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. .

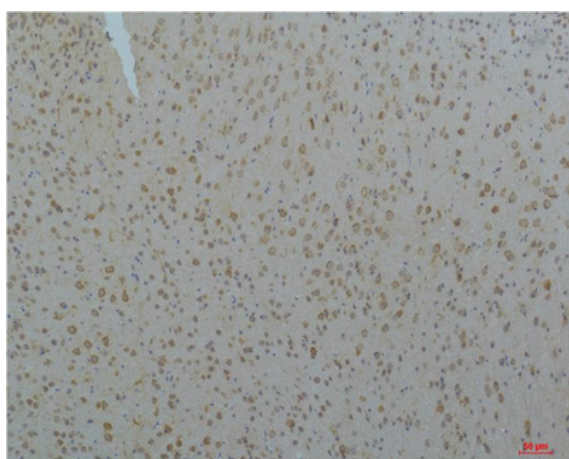
**Expression :**

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.

## Products Images



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



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