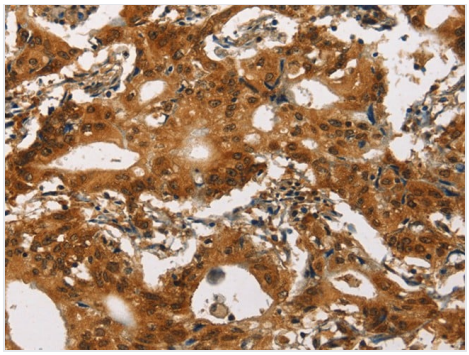
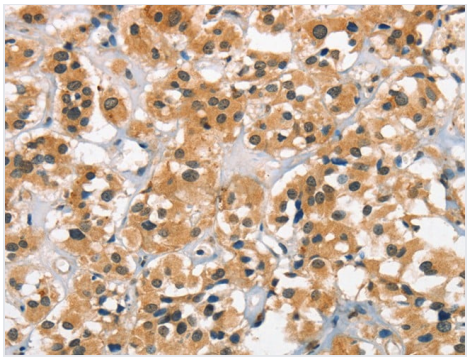
CACNA1C Antibody – Rabbit Polyclonal

PRODUCT OVERVIEW

Product Name	CACNA1C, Polyclonal Antibody
Full Product Name	CACNA1C Polyclonal Antibody
Product Gene Name	anti-CACNA1C antibody
Product Synonym Names	TS; LQT8; CACH2; CACN2; CaV1.2; CCHL1A1; CACNL1A1
Clonality	Polyclonal
Isotype	IgG
Host	Rabbit
Species Reactivity	Human, Mouse, Rat
Purity/Purification	Antigen affinity purification
Concentration	2.2mg/mL (lot specific)
Preparation and Storage	Store at -20 degree C (regular) and -80 degree C (long term). Avoid freeze / thaw cycles.
Molecular Weight	239,704 Da
OMIM	114205
Immunogen	Synthetic peptide of human CACNA1C
Buffer	PBS with 0.05% sodium azide, 50% glycerol, pH7.3
Product Categories/Family for anti-CACNA1C antibody	Cancer
ISO Certification	Manufactured in an ISO 9001:2015 Certified Laboratory.
Applications Tested/Suitable for anti-CACNA1C antibody	ELISA (EIA), Immunohistochemistry (IHC)
Application Notes for anti-CACNA1C antibody	IHC: 1:25-1:100
Related Product Information for anti-CACNA1C antibody	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.
Other Notes	Small volumes of anti-CACNA1C antibody vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.
Searchable Terms for CACNA1C purchase	MBS2522639 is an antibody targeting CACNA1C. Also known as CACNA1C Polyclonal Antibody. Reactive in Human, Mouse, Rat. Host: Rabbit.



Immunohistochemistry (IHC) of anti-CACNA1C antibody
Immunohistochemistry of paraffin-embedded Human gasrtic cancer tissue using CACNA1C Polyclonal Antibody at dilution 1:30



Immunohistochemistry (IHC) of anti-CACNA1C antibody
Immunohistochemistry of paraffin-embedded Human thyroid cancer tissue using CACNA1C Polyclonal Antibody at dilution 1:30

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for CACNA1C. It may not necessarily be applicable to this product.

NCBI GI #	187955897
NCBI GeneID	775
NCBI Accession #	AAI46847.1
UniProt Secondary Accession #	Q13917; Q13918; Q13919; Q13920; Q13921; Q13922; Q13923; Q13924; Q13925; B2RUT3; E9PDJ0
UniProt Related Accession #	Q13936
NCBI Official Full Name	CACNA1C protein
NCBI Official Synonym Full Names	calcium channel, voltage-dependent, L type, alpha 1C subunit
NCBI Official Symbol	CACNA1C
NCBI Official Synonym Symbols	TS; LQT8; CACH2; CACN2; CaV1.2; CCHL1A1; CACNL1A1
UniProt Protein Name	Voltage-dependent L-type calcium channel subunit alpha-1C
UniProt Synonym Protein Names	Calcium channel, L type, alpha-1 polypeptide, isoform 1, cardiac muscle; Voltage-gated calcium channel subunit alpha Cav1.2
Protein Family	Voltage-dependent L-type calcium channel
UniProt Gene Name	CACNA1C
UniProt Synonym Gene Names	CACH2; CACN2; CACNL1A1; CCHL1A1
UniProt Entry Name	CAC1C_HUMAN
NCBI Protein Information	voltage-dependent L-type calcium channel subunit alpha-1C; DHPR, alpha-1 subunit; calcium channel, L type, alpha-1 polypeptide, isoform 1, cardiac muscle; calcium channel, cardic dihydropyridine-sensitive, alpha-1 subunit; voltage-dependent L-type Ca2+ channel alpha 1 subunit; voltage-gated L-type calcium channel Cav1.2 alpha 1 subunit, splice variant 10*

UniProt Comments for CACNA1C	CACNA1C: 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. Binding of calmodulin or CABP1 at the same regulatory sites results in an opposit effects on the channel function. Defects in CACNA1C are the cause of Timothy syndrome (TS). 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. Defects in CACNA1C are the cause of Brugada syndrome type 3 (BRGDA3). 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. Belongs to the calcium channel alpha-1 subunit (TC 1.A.1.11) family. CACNA1C subfamily. 35 isoforms of the human protein are produced by alternative splicing. Protein type: Membrane protein, multi-pass; Channel, calcium; Membrane protein, integral Chromosomal Location of Human Ortholog: 12p13.3 Cellular Component: cell soma; postsynaptic density; cytoplasm; plasma membrane; integral to membrane; caveolar macromolecular signaling complex; voltage-gated calcium channel complex; dendritic shaft; Z disc Molecular Function: calmodulin binding; voltage-gated calcium channel activity; protein binding; enzyme binding; metal ion binding; high voltage-gated calcium channel activity; alpha-actinin binding Biological Process: axon guidance; regulation of organ growth; glucose homeostasis; adult walking behavior; calcium ion-dependent exocytosis; growth hormone secretion; synaptic transmission; elevation of cytosolic calcium ion concentration; smooth muscle contraction involved in micturition; insulin secretion; regulation of blood pressure; regulation of vasoconstriction; energy reserve metabolic process; visual learning; regulation of insulin secretion Disease: Timothy Syndrome; Brugada Syndrome 3
Research Articles on CACNA1C	**1.** Our findings suggest that altered hippocampal and frontolimbic function is associated with variants in the CACNA1C gene.
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