Recombinant CAC1C protein (His tag)

Catalog Number	544950
Synonyms	Calcium channel, L type, alpha-1 polypeptide, isoform 1, cardiac muscle; Voltage-gated calcium channel subunit alpha Cav1.2
Species	Human
Expression System	E. coli
Accession	Q13936
Molecular Weight	Predictes a molecular mass of 11.83 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 12 kDa band.

Product Information

Sequence Region	1072-1159
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>88%, by SDS-PAGE with Coomassie Brilliant Blue staining.
Endotoxin	Not tested.
Activity	Not tested.
Stability	Samples are stable for up to twelve months from date of receipt at -70℃
Protein Construction	DNA encoding 1072-1159 aa (Q13936) were fused with 6His tag.

Storage & Handling

Reconstitution	Reconstitute at 0.25 µg/µl in sterile water for short-term storage. Reconstitution with 50% glycerol solution is recommended for longer term storage (see Stability and Storage for more details). If a different concentration is needed for your purposes please adjust the reconstitution volume as required (please note: the ion concentration of the final solution will vary according to the volume used). Note: Centrifuge vial before opening. When reconstituting, gently pipet and wash down the sides of the vial to ensure full recovery of the protein into solution.
Storage	Store it under sterile conditions at -20℃ to -80℃. It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles.
Shipping	In general, recombinant proteins are provided as lyophilized powder which are shipped at ambient temperature. Bulk packages of recombinant proteins are provided as frozen liquid. They are shipped out with blue ice unless customers require otherwise.

Description

Description	Recombinant Human CACNA1C (1072-1159) Fragment - A highly purified, stable protein fragment derived from the voltage-dependent L-type calcium channel subunit alpha-1C (Cav1.2). This 88-amino acid fragment represents a structurally optimized region of the cardiac muscle calcium channel, ideal for structural studies, antibody production, and functional assays investigating calcium channel biology. The full-length Voltage-dependent L-type calcium channel subunit alpha-1C (CACNA1C) serves as the pore-forming component of L-type calcium channels, mediating calcium ion influx into the cytoplasm and triggering calcium release from the sarcoplasm. This protein plays critical roles in excitation-contraction coupling in cardiac muscle, heart development, regulation of heart rhythm, and smooth muscle contraction in blood vessels and intestines. It belongs to the high-voltage activated (HVA) group of calcium channels and localizes to the cell membrane, particularly in sarcolemma and T-tubules of cardiac cells. The protein's function in arterial smooth muscle contraction makes it essential for blood pressure regulation. Additionally, research indicates it may serve as a receptor for Influenzavirus when sialylated and expressed on lung tissues. The full-length protein's significance in cardiovascular physiology and potential role in viral entry underscores the importance of studying its structural domains for both basic research and therapeutic development.