重组人CAC1G蛋白

Recombinant CAC1G protein (His tag)

目录号 Catalog Number	539483
同用名 Synonyms	Cav3.1c; NBR13; Voltage-gated calcium channel subunit alpha Cav3.1
种属 Species	Human
表达系统 Expression System	E. coli
蛋白编号 Accession	O43497
分子量 Molecular Weight	Predictes a molecular mass of 17.09 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 17 kDa band.

产品信息

氨基酸序列 Amino Acid Sequence	MSKIKHHHHH HGGSGLLRNR CFLPENFSLP LSVDLERYYQ TENEDESPFI CSQPRENGMR SCRSVPTLRG DGGGGPPCGL DYEAYNSSSN TTCVNWNQYY TNCSAGEHNP FKGAINFDNI GYAWIAIFQV ITLEGWVDIM YFVMDAHSFY
性状 Form	冻干粉末 Lyophilized powder
组分 Formulation	Lyophilized from sterile PBS, pH 7.4
纯度 Purity	>85%, by SDS-PAGE with Coomassie Brilliant Blue staining.
内毒素 Endotoxin	Not tested.
活性 Activity	Not tested.
稳定性 Stability	Samples are stable for up to twelve months from date of receipt at -70℃
蛋白构建 Protein Construction	DNA encoding 235-370 aa (O43497) were fused with N-terminal 6His tag.

保存与运输

复溶 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.
储存 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.
运输 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.

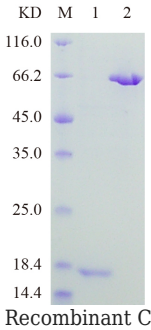
功能描述

研究背景 Background

Recombinant Human Voltage-dependent T-type calcium channel subunit alpha-1G (Cav3.1c) fragment (residues 235-370) is a high-purity, stable protein designed for structural and biochemical studies. This 136-amino acid fragment, derived from the CACNA1G gene, offers a soluble and functional unit ideal for investigating T-type calcium channel mechanisms and their roles in neuronal and cardiac physiology.
The full-length Voltage-dependent T-type calcium channel subunit alpha-1G (Cav3.1c), encoded by the CACNA1G gene in Homo sapiens, functions as a voltage-sensitive calcium channel (VSCC) that mediates calcium ion entry into excitable cells. It generates T-type calcium currents, which are low-voltage activated (LVA) and critical for pacemaking in central neurons and cardiac nodal cells. This channel also supports calcium signaling in secretory cells and vascular smooth muscle, influencing processes such as hormone release, gene expression, and cell motility. It is strongly blocked by mibefradil and exhibits voltage-dependent inactivation, enabling modulation of neuronal firing patterns essential for information processing. Subcellularly, it localizes to the cell membrane as a multi-pass membrane protein and is also found in the cytoplasm. Isoform 2 similarly contributes to T-type calcium currents, underscoring the protein's broad physiological relevance in calcium-dependent cellular functions.

验证数据

SDS-PAGE



Recombinant CAC1G protein (His tag) SDS-PAGE
M: Marker; Lane 1: CAC1G; Lane 2: BSA