Voltage-Dependent L-Type Calcium Channel Subunit Beta-4 (CACNB4) Mouse Recombinant Protein

PRODUCT OVERVIEW

Product Name	Voltage-dependent L-type calcium channel subunit beta-4 (Cacnb4), Recombinant Protein
Full Product Name	Recombinant Mouse Voltage-dependent L-type calcium channel subunit beta-4 (Cacnb4)
Product Gene Name	Cacnb4 recombinant protein
Product Synonym Gene Name	Cacnb4
Sequence	MSSSYGKNGA ADGPHSPSSQ VARGTTTRRS RLKRSDGSTT STSFILRQGS ADSYTSRPSD SDVSLEEDRE AIRQEREQQA AIQLERAKSK PVAFAVKTNV SYCGALDEDV PVPSTAISFD AKDFLHIKEK YNNDWWIGRL VKEGCEIGFI PSPLRLENIR IQQEQKRGRF HGGKSSGNSS SSLGEMVSGT FRATPTTTAK QKQKVTEHIP PYDVVPSMRP VVLVGPSLKG YEVTDMMQKA LFDFLKHRFD GRISITRVTA DISLAKRSVL NNPSKRAIIE RSNTRSSLAE VQSEIERIFE LARSLQLVVL DADTINHPAQ LIKTSLAPII VHVKVSSPKV LQRLIKSRGK SQSKHLNVQL VAADKLAQCP PEMFDVILDE NQLEDACEHL GEYLEAYWRA THTSSSTPMT PLLGRNVGST ALSPYPTAIS GLQSQRMRHS NHSTENSPIE RRSLMTSDEN YHNERARKSR NRLSSSSQHS RDHYPLVEED YPDSYQDTYK PHRNRGSPGG CSHDSRHRL
Host	E Coli or Yeast or Baculovirus or Mammalian Cell
Form/Format	Lyophilized or liquid (Format to be determined during the manufacturing process)
Purity/Purification	Greater or equal to 85% purity as determined by SDS-PAGE. (lot specific)
Preparation and Storage	Store at -20 degrees C. For long-term storage, store at -20 degrees C or -80 degrees C. Store working aliquots at 4 degrees C for up to one week. Repeated freezing and thawing is not recommended.
Molecular Weight	53,084 Da
Sequence Positions	1-519, Full length protein
Tag Information	This protein contains an N-terminal tag and may also contain a C-terminal tag. Tag types are determined by various factors including tag-protein stability, please inquire for tag information.
Sterility	Sterile filter available upon request.
Endotoxin	Low endotoxin available upon request.
3D Structure	ModBase 3D Structure for Q8R0S4
Species	Mouse
ISO Certification	Manufactured in an ISO 9001:2015 Certified Laboratory.
Related Product Information for Cacnb4 recombinant protein	This gene encodes a member of the beta subunit family of voltage-dependent calcium channel complex proteins. Calcium channels mediate the influx of calcium ions into the cell upon membrane polarization and consist of a complex of alpha-1, alpha-2 delta, beta, and gamma subunits in a 1:1:1:1 ratio. Various versions of each of these subunits exist, either expressed from similar genes or the result of alternative splicing. The protein encoded by this locus plays an important role in calcium channel function by modulating G protein inhibition, increasing peak calcium current, controlling the alpha-1 subunit membrane targeting and shifting the voltage dependence of activation and inactivation. Certain mutations in this gene have been associated with idiopathic generalized epilepsy (IGE) and juvenile myoclonic epilepsy (JME). Multiple transcript variants encoding different isoforms have been found for this gene.
Other Notes	Small volumes of Cacnb4 recombinant protein 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 Cacnb4 purchase	MBS1347717 is a recombinant protein targeting Cacnb4. Also known as Recombinant Mouse Voltage-dependent L-type calcium channel subunit beta-4 (Cacnb4). Host: E Coli or Yeast or Baculovirus or Mammalian Cell.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for Cacnb4. It may not necessarily be applicable to this product.

NCBI GI #	80861468
NCBI GeneID	12298
NCBI Accession #	NP_001032176.1
UniProt Primary Accession #	Q8R0S4
UniProt Secondary Accession #	Q3UHK2; Q8BRN6; Q8CAJ9
UniProt Related Accession #	Q8R0S4
GenBank Nucleotide #	NM_001037099.2
NCBI Official Full Name	voltage-dependent L-type calcium channel subunit beta-4 isoform a
NCBI Official Synonym Full Names	calcium channel, voltage-dependent, beta 4 subunit
NCBI Official Symbol	Cacnb4
NCBI Official Synonym Symbols	lh; Cchb4; 3110038O15Rik
UniProt Protein Name	Voltage-dependent L-type calcium channel subunit beta-4
UniProt Synonym Protein Names	Calcium channel voltage-dependent subunit beta 4Curated
Protein Family	Voltage-dependent L-type calcium channel
UniProt Gene Name	Cacnb4
UniProt Synonym Gene Names	CAB4Curated
NCBI Protein Information	voltage-dependent L-type calcium channel subunit beta-4
UniProt Comments for Cacnb4	The beta subunit of voltage-dependent calcium channels contributes to the function of the calcium channel by increasing peak calcium current, shifting the voltage dependencies of activation and inactivation, modulating G protein inhibition and controlling the alpha-1 subunit membrane targeting.
Research Articles on Cacnb4	**1.** Study demonstrates that the lack of the voltage-gated calcium channel beta4 subunit causes a decreased late development in cerebellar cortical networks, characterized by reduced parallel fibre-purkinje cell input, shorter purkinje cell dendrites and depressed purkinje cell output.
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