

Datasheet for ABIN3131841

CACNA1B Protein (AA 1695-2327) (His tag)



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1 Image

Overview

Quantity:	1 mg
Target:	CACNA1B
Protein Characteristics:	AA 1695-2327
Origin:	Mouse
Source:	Insect Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This CACNA1B protein is labelled with His tag.
Application:	SDS-PAGE (SDS), Western Blotting (WB), Crystallization (Crys), ELISA

Product Details

Sequence: VAVIMDNFEY LTRDSSILGP HHLDEFIRVW AEYDPAACGR ISYNDMFEML KHMSPPLGLG
 KKCPARVAYK RLVRMNMPIS NEDMTVHFTS TLMALIRTAL EIKLAPAGTK QHQCDALRK
 EISSVWANLP QKTLDLLVPP HKPDEMTVGK VYAALMIFDF YKQNKTTTRDQ THQAPGGLSQ
 MGPVSLFHPL KATLEQTQPA VLRGARVFLR QKSATSLSNG GAIQTQESGI KESLSWGTQR
 TQDALYEARA PLERGHSAEI PVGQSGTLAV DVQM QNM TLR GPDGEPQ PGL ESQGRAASMP
 RLAAETQPAP NASPMKRSIS TLAPRPHGTQ LCSTVLD RPP PSQASHHHHH RCHRRRD KKK
 RSLEKGPSLS VDPEGAPSTA AGPGLPHGEG STACRRDRKQ ERGRSQERRQ PSSSSSEKQR
 FYSCDRFGSR EPPQLMP SLS SHPTSPTAAL EPAPHPQ GSG SVNGSPLMST SGASTPGRGG
 RRQLPQTPLT PRPSITYKTA NSSPVHFAEG QSG LPAFSPG RLSRGLSEHN ALLQKEPLSQ
 PLAPGSRIGS DPYLGQRLDS EASAHTLPED TLTFEEAVAT NSGRSSRTSY VSSLTSQSH P
 LRRVPNGYHC TLGLSTGVRA RSHYHHPDQD HWC

Sequence without tag. Tag location is at the discretion of the manufacturer. If you have a

special request, please contact us.

Characteristics:

- Made in Germany - from design to production - by highly experienced protein experts.
- Mouse Cacna1b Protein (raised in Insect Cells) purified by multi-step, protein-specific process to ensure crystallization grade.
- State-of-the-art algorithm used for plasmid design (Gene synthesis).

This protein is a made to order protein and will be made for the first time for your order. Our experts in the lab will ensure that you receive a correctly folded protein.

The big advantage of ordering our made-to-order proteins in comparison to ordering custom made proteins from other companies is that there is no financial obligation in case the protein cannot be expressed or purified.

In the unlikely event that the protein cannot be expressed or purified we do not charge anything (other companies might charge you for any performed steps in the expression process for custom-made proteins, e.g. fees might apply for the expression plasmid, the first expression experiments or purification optimization).

When you order this made-to-order protein you will only pay upon receipt of the correctly folded protein. With no financial risk on your end you can rest assured that our experienced protein experts will do everything to make sure that you receive the protein you ordered.

The concentration of our recombinant proteins is measured using the absorbance at 280nm. The protein's absorbance will be measured in several dilutions and is measured against its specific reference buffer.

The concentration of the protein is calculated using its specific absorption coefficient. We use the ExPASy's ProtParam tool to determine the absorption coefficient of each protein.

Purification:

Two step purification of proteins expressed in baculovirus infected SF9 insect cells:

1. In a first purification step, the protein is purified from the cleared cell lysate using three different His-tag capture materials: high yield, EDTA resistant, or DTT resistant. Eluate fractions are analyzed by SDS-PAGE.
2. Protein containing fractions of the best purification are subjected to second purification step through size exclusion chromatography. Eluate fractions are analyzed by SDS-PAGE and Western blot.

Purity:

>95 % as determined by SDS PAGE, Size Exclusion Chromatography and Western Blot.

Sterility:

0.22 µm filtered

Endotoxin Level:

Protein is endotoxin free.

Grade:

Crystallography grade

Target Details

Target:	CACNA1B
Alternative Name:	Cacna1b (CACNA1B Products)
Background:	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-1B gives rise to N-type calcium currents. N-type calcium channels belong to the 'high-voltage activated' (HVA) group and are blocked by omega-conotoxin-GVIA (omega-CTx-GVIA) and by omega-agatoxin-IIIA (omega-Aga-IIIA). They are however insensitive to dihydropyridines (DHP), and omega-agatoxin-IVA (omega-Aga-IVA). Calcium channels containing alpha-1B subunit may play a role in directed migration of immature neurons.
Molecular Weight:	70.0 kDa Including tag.
UniProt:	O55017

Application Details

Application Notes:	In addition to the applications listed above we expect the protein to work for functional studies as well. As the protein has not been tested for functional studies yet we cannot offer a guarantee though.
Comment:	Protein has not been tested for activity yet. In cases in which it is highly likely that the recombinant protein with the default tag will be insoluble our protein lab may suggest a higher molecular weight tag (e.g. GST-tag) instead to increase solubility. We will discuss all possible options with you in detail to assure that you receive your protein of interest.
Restrictions:	For Research Use only

Handling

Format:	Liquid
Buffer:	100 mM NaCl, 20 mM Hepes, 10% glycerol. pH value is at the discretion of the manufacturer.
Handling Advice:	Avoid repeated freeze-thaw cycles.
Storage:	-80 °C
Storage Comment:	Store at -80°C.
Expiry Date:	Unlimited (if stored properly)



Image 1. „Crystallography Grade“ protein due to multi-step, protein-specific purification process