

Datasheet for ABIN3090732

## Caldesmon Protein (AA 1-793) (His tag)



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### 1 Image

#### Overview

Quantity:	1 mg
Target:	Caldesmon (CALD1)
Protein Characteristics:	AA 1-793
Origin:	Human
Source:	Insect Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This Caldesmon protein is labelled with His tag.
Application:	Western Blotting (WB), SDS-PAGE (SDS), ELISA, Crystallization (Crys)

#### Product Details

Sequence:	<p>MDDFERRREL RRQKREEMRL EAERIAQRN DDDEEEAARE RRRRARQERL RQKQEEESLG</p> <p>QVTDQVEVNA QNSVPDEEAK TTTTNTQVEG DDEAAFLERL ARREERRQKR LQEALERQKE</p> <p>FDPTITDASL SLPSRRMQND TAENETTEKE EKSESRQERY EIEETETVTK SYQKNDWRDA</p> <p>EENKKEDKEK EEEEEKPKR GSIGENQVEV MVEEKTESQ EETVMSLKN GQISSEEPKQ</p> <p>EEEREQGSDE ISHHEKMEEE DKERAAEERA RLEAEERERI KAEQDKKIAD ERARIEAEEK</p> <p>AAAQERERRE AEERERMREE EKRAAEERQR IKKEEKRAAE ERQRIKEEEK RAAEERQRIK</p> <p>EEEKRAAEER QRARAEIEEK AKVEEQKRNK QLEEKHAMQ ETKIKGEKVE QKIEGKWNNE</p> <p>KKAQEDKLQT AVLKKQGEEK GTKVQAKREK LQEDKPTFKK EEIKDEKIKK DKEPKKEEVKS</p> <p>FMDRKKGFTE VKSQNGEFMT HKLKHTENTF SRPGGRASVD TKEAGAPQV EAGKRLEELR</p> <p>RRRGETESEE FEKLKQKQE AALELEELKK KREERRKVL EEEQRRKQEE ADRKLREEEE</p> <p>KRRLKEEIER RRAEAAEKRQ KMPEDGLSDD KKPFCFTPK GSSLKIEERA EFLNKSQKS</p> <p>SGVKSTHQAA IVSKIDSRLE QYTSIAIEGTK SAKPTKPAAS DLPVPAEGVR NIKSMWEKGN</p>
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VFSSPTAAGT PNKETAGLVK GVSSRINEWL TKTPDGNKSP APKPSDLRPG DVSSKRNLWE  
KQSVDKVTSP TKV

**Sequence without tag. Tag location is at the discretion of the manufacturer. If you have a special request, please contact us.**

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Characteristics:

- Made in Germany - from design to production - by highly experienced protein experts.
- Human CALD1 Protein (raised in E. Coli) 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.

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Purification:

Two step purification of proteins expressed in bacterial culture:

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.

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Purity:

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

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Sterility:

0.22 µm filtered

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Endotoxin Level:

Protein is endotoxin free.

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## Product Details

Grade: Crystallography grade

## Target Details

Target: Caldesmon (CALD1)

Alternative Name: CALD1 ([CALD1 Products](#))

Background: Actin- and myosin-binding protein implicated in the regulation of actomyosin interactions in smooth muscle and nonmuscle cells (could act as a bridge between myosin and actin filaments). Stimulates actin binding of tropomyosin which increases the stabilization of actin filament structure. In muscle tissues, inhibits the actomyosin ATPase by binding to F-actin. This inhibition is attenuated by calcium-calmodulin and is potentiated by tropomyosin. Interacts with actin, myosin, two molecules of tropomyosin and with calmodulin. Also play an essential role during cellular mitosis and receptor capping. Involved in Schwann cell migration during peripheral nerve regeneration (By similarity). {ECO:0000250, ECO:0000269|PubMed:8227296}.

Molecular Weight: 94.2 kDa Including tag.

UniProt: [Q05682](#)

Pathways: [Myometrial Relaxation and Contraction](#)

## 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: 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.

## Handling

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Storage: -80 °C

Storage Comment: Store at -80°C.

Expiry Date: Unlimited (if stored properly)

## Images

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