

Product datasheet for **RC224908**

Caldesmon (CALD1) (NM_033138) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Caldesmon (CALD1) (NM_033138) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	CALD1
Synonyms:	CDM; H-CAD; HCAD; L-CAD; LCAD; NAG22
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin



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ORF Nucleotide
Sequence:

>RC224908 representing NM_033138
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTGACTGGATCCGGTACCGAGGAGATCTGCC
GCCCGCATCGCC

ATGGATGATTTTGAGCGTCGCAGAGAACTAGAAGGCAAAAGAGGGAGGAGATGCGACTCGAAGCAGAAA
GAATCGCCTACCAGAGGAATGACGATGATGAAGAGGAGGCAGCCGGGAACGGCGCCGCCGAGCCGACA
GGAACGGCTGCGGCAGAAAGCAGGAGGAAGAATCCTTGGGACAGGTGACCGACCAGGTGGAGGTGAATGCC
CAGAACAGTGTGCTGACGAGGAGGCCAAGACAACCACCACAAACTCAAGTGAAGGGGATGATGAGG
CCGATTCTGGAGCGCCTGGCTCGGCGTGAGGAAAGACGCCAAAAACGCCTTCAGGAGGCTCTGGAGCG
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ACAGCAGAAAATGAACTACCGAGAAGGAAGAAAAAGTGAAGTCCCAAGAAAGATACGAGATAGAGG
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AAAGCCGAGCAAGACAAAAGATAGCAGATGAACGAGCAAGAATTGAAGCAGAAGAAAAGCAGCTGCC
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ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence: >RC224908 representing NM_033138
Red=Cloning site Green=Tags(s)

MDDFERRRELRRQKREEMRLEAERIAAYQRNDDEEEAARERRRRARQERLRQKQEEESLQGVTDQVEVNA
 QNSVPDEEAKTTTTNTQVEGDDEAAFLERLARREERRQKRLQEALERQKEFDPTITDASLSLPSRRMOND
 TAENETTEKEEKSESRQERYEIEETETVTKSYQKNDWRDAEENKKEDKEKEEEEEKPKRGSIGENQVEV
 MVEEKTTEEQEETVVMMLKNGQISSSEPKQEEEREQGSDEISHHEKMEEDKERAERARLEAEERERI
 KAEQDKKIADERARIEAEKAAAQERERREAEERERMREEEKRAAEERQRIKEEEKRAAEERQRIKEEEK
 RAAEERQRIKEEEKRAAEERQARAEEEEKAKVEEQKRNKQLEEKHAMQETKIKGEKVEQKIEGKWVNE
 KKAQEDKLQTAVLKKGEEKGTKVQAKREKLQEDKPTFKKEEIKDEKIKKDEKPEEVEKSFMDRKKGFTE
 VKSQNGEFMTHLKHTEENTFSRPGGRASVDTKEAEGAPQVEAGKRLLEELRRRRGETESEFEKQKQKQEE
 AALELEELKKKREERRKLEEEEEQRRKQEEADRKLREEEKRLKEEIERRAEAAEKRQKMPEDGLSDD
 KKPFCFPTKGGSLKIEERAFLNKSQKSSGVKSTHQAIVSKIDSRLEQYTSIEGKSAKPTKPAAS
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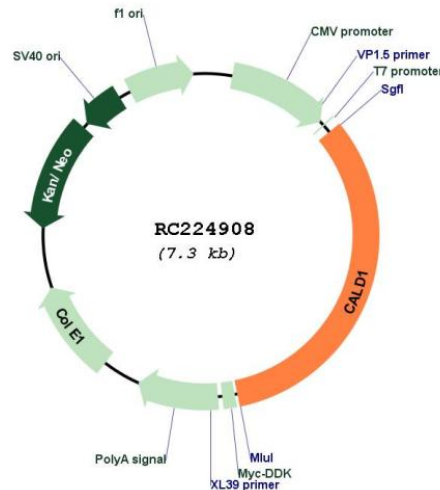
TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites:

Sgfl-MluI

Cloning Scheme:



Plasmid Map:


ACCN: NM_033138

ORF Size: 2379 bp

OTI Disclaimer: The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in agreement with the reference, but a complete review of all prevailing variants is recommended prior to use. [More info](#)

OTI Annotation: This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

Components: The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

Reconstitution Method:

1. Centrifuge at 5,000xg for 5min.
2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.
3. Close the tube and incubate for 10 minutes at room temperature.
4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.
5. Store the suspended plasmid at -20°C. The DNA is stable for at least one year from date of shipping when stored at -20°C.

RefSeq: [NM_033138.4](#)

RefSeq Size: 5241 bp

RefSeq ORF: 2382 bp

Locus ID: 800

UniProt ID: [Q05682](#)

Cytogenetics: 7q33

Domains:	Caldesmon
Protein Pathways:	Vascular smooth muscle contraction
MW:	93.2 kDa
Gene Summary:	<p>This gene encodes a calmodulin- and actin-binding protein that plays an essential role in the regulation of smooth muscle and nonmuscle contraction. The conserved domain of this protein possesses the binding activities to Ca(2+)-calmodulin, actin, tropomyosin, myosin, and phospholipids. This protein is a potent inhibitor of the actin-tropomyosin activated myosin MgATPase, and serves as a mediating factor for Ca(2+)-dependent inhibition of smooth muscle contraction. Alternative splicing of this gene results in multiple transcript variants encoding distinct isoforms. [provided by RefSeq, Jul 2008]</p>