

Product datasheet for **RC214238**

Caldesmon (CALD1) (NM_033139) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Caldesmon (CALD1) (NM_033139) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Caldesmon
Synonyms:	CDM; H-CAD; HCAD; L-CAD; LCAD; NAG22
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide Sequence:

>RC214238 representing NM_033139
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGCATCGCC**

ATGCTGGTGGATCCGGATCGCATGGAAGACGCAGCCTGGCCGCGCTCTCCAAATCGCCTACCAGAGGA
 ATGACGATGATGAAGAGGAGGCAGCCCGGAACCGCGCCGCCAGCCGACAGGAACGGCTGCGGCAGAA
 GCAGGAGGAAGAATCCTTGGGACAGGTGACCGACCAGGTGGAGGTGAATGCCAGAACAGTGTGCCTGAC
 GAGGAGGCCAAGACAACCACCACAAACTCAAGTGAAGGGGATGATGAGGCCGATTCTCGGAGCGCC
 TGGCTCGGCTGAGGAAAGACGCCAAAAACGCCTTCAGGAGGCTCTGGAGCGCAGAAGGAGTTCGACCC
 AACATAACAGATGCAAGTCTGTCGCTCCCAAGCAGAAGAATGCAAAATGACACAGCAGAAAATGAACT
 ACCGAGAAGGAAGAAAAAGTGAAGTCGCCAAGAAAGATACGAGATAGAGGAAACAGAAACAGTCACCA
 AGTCTACCAGAAGAATGATTGGAGGGATGCTGAAGAAAAAAGAAAGACAAGGAAAAGGAGGAGGA
 GGAAGAGGAGAAGCCAAAGCGAGGGAGCATTGGAGAAAATCAGGGAGAAGAGAAGGGAATAAAGTGCAA
 GCTAAAAGAGAAAAGCTCCAAGAAGACAAGCCTACCTTCAAAAAAGAAAGATCAAAGATGAAAAGATTA
 AAAAGGACAAAGAACCCAAAGAAGAAGTTAAGAGCTTCATGGATCGAAAAGAGGGATTTACAGAAGTTAA
 GTCGCAGAATGGAGAATTCATGACCCACAACTTAAACATACTGAGAATACTTTTCAGCCGCCCTGGAGGG
 AGGGCCAGCGTGGACCAAGGAGGCTGAGGGCGCCCCCAGGTGGAAGCCGGCAAAAGGCTGGAGGAGC
 TTCGTCGTCGTCGCGGGGAGACCAGAGCGAAGAGTTCGAGAAGCTCAAACAGAAGCAGCAGGAGGCGGC
 TTTGGAGCTGGAGGAAGCTCAAGAAAAAGAGGGAGGAGAGAAGGAAGTCTGGAGGAGGAAGAGCAGAGG
 AGGAAGCAGGAGGAAGCCGATCGAAAACCTCAGAGAGGAGGAAGAGAAGAGGAGGCTAAAGGAAGATTTG
 AAAGCGAAGAGCAGAAGCTGTCGAAAACGCCAGAAGATGCCAGAAGATGGCTTGTGATGACAAGAA
 ACCATTCAAGTGTTCCTCACTCTAAAGGTTTCATCTCTCAAGATAGAAGAGCGAGCAGAATTTTTGAATAAG
 TCTGTGCAGAAAAGCAGTGGTGTCAAATCGACCCATCAAGCAGCAATAGTCTCAAAGATTGACAGCAGAC
 TGGAGCAGTATACCAGTGAATGAGGGAACAAAAAGCGCAAAACCTACAAAGCCGGCAGCCTCGGATCT
 TCCTGTTCTGCTGAAGGTGTACGCAACATCAAGAGTATGTGGGAGAAAGGGAATGTGTTTTATCCCCC
 ACTGCAGCAGGCACACCAATAAGGAACTGCTGGCTTGAAGGTAGGGGTTTCTAGCCGCATCAATGAAT
 GGCTAACTAAAACCCAGATGGAACAAGTCACCTGCTCCCAACCTTCTGACTTGAGACCAGGAGACGT
 ATCCAGCAAGCGGAACCTCTGGGAAAAGCAATCTGTGGATAAGGTCACTTCCCCACTAAGTT

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RC214238 representing NM_033139
 Red=Cloning site Green=Tags(s)

MLGGSGSHGRRSLAALSQIAYQRNDDDEEEAERRRRRARQERLRQKQEEESLGQVTDQVEVNAQNSVPD
 EEAKTTTTNTQVEGDDEAAFLERLARREERRQKRLQEALERQKEFDPTITDASLSLPSRRMQNDTAENET
 TEKEEKESRQERYEIEETETVTKSYQKNDWRDAEENKKEDEKEEEEEEEKPKRGSIGENQGEKGTKVQ
 AKREKLQEDKPTFKKEEIKDEKIKKDKPEKEEVKSFMDRKKGFTEVKSQNGEFMTHKLKHTENTFSRPGG
 RASVDTKEAEGAPQVEAGKRLLEELRRRRGETESEEFELKQKQQAALALEELKKREERRKVLLEEEQR
 RKQEEADRKLREEEEKRRLKEEIERRRAEAAEKQKMPEDGLSDDKPKFCFTPKGSSSLKIEERAFLNK
 SVQKSSGVKSTHQAIVSKIDSRLQYTSIIEGTSKAKPTKPAASDLVPAEGVRNIKSMWEKGNVFSPP
 TAAGTPNKETAGLKVGVSSRINEWLTKTPDGNKSPAPKPSDLRPGDVSSKRNLWEKQSVDKVTSPTKV

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites:

SgfI-MluI

Cloning Scheme:

ACCN: NM_033139

ORF Size: 1674 bp

OTI Disclaimer: Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at custsupport@origene.com or by calling 301.340.3188 option 3 for pricing and delivery.

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.

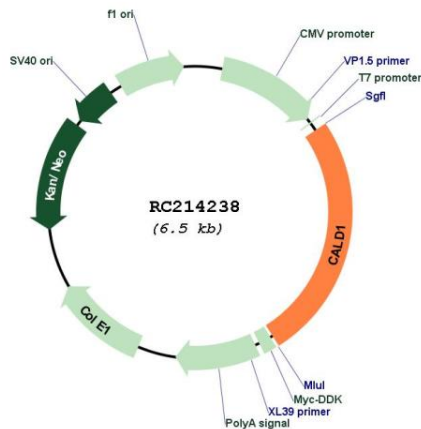
Components: The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

- 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.

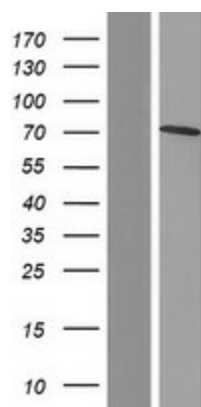
RefSeq: [NM_033139.3, NP_149130.1](#)
RefSeq Size: 4282 bp
RefSeq ORF: 1677 bp
Locus ID: 800
UniProt ID: [Q05682](#)
Cytogenetics: 7q33
Domains: Caldesmon
Protein Pathways: Vascular smooth muscle contraction
MW: 64.1 kDa

Gene Summary: 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]

Product images:



Circular map for RC214238



Western blot validation of overexpression lysate (Cat# [LY409704]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC214238 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).