

Product datasheet for **RG204489**

Caldesmon (CALD1) (NM_004342) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Caldesmon (CALD1) (NM_004342) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Caldesmon
Synonyms:	CDM; H-CAD; HCAD; L-CAD; LCAD; NAG22
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide Sequence:

>RG204489 representing NM_004342
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGCATCGCC**

ATGGATGATTTTGAGCGTCGCAGAGAACTTAGAAGGCCAAAAGAGGGAGGAGATGCGACTCGAAGCAGAAA
 GAATCGCCTACCAGAGGAATGACGATGATGAAGAGGAGGAGCCCGGGAACGGCGCCGCCGAGCCGACA
 GGAACGGCTGCGGCAGAAGCAGGAGGAAGAATCCTTGGGACAGGTGACCGACCAGGTGGAGTGAATGCC
 CAGAACAGTGTGCTGACGAGGAGGCCAAGACAACCACCACAAACTCAAGTGAAGGGGATGATGAGG
 CCGCATTCTGGAGCGCCTGGCTCGGCGTGAGGAAAGACGCCAAAAACGCCTTCAGGAGGCTCTGGAGCG
 GCAGAAGGAGTTCGACCAACAATAACAGATGCAAGTCTGTGCTCCCAAGCAGAAGAATGCAAAATGAC
 ACAGCAGAAAATGAACTACCGAGAAGGAAGAAAAAGTGAAGTCCCAAGAAAGATACGAGATAGAGG
 AAACAGAAACAGTCACCAAGTCTACCAGAAGAATGATTGGAGGGATGCTGAAGAAAACAAGAAAGAAGA
 CAAGGAAAAGGAGGAGGAGAAGAGGAGAAAGCCAAAGCGAGGGAGCATTGGAGAAAATCAGATCAAAGAT
 GAAAAGATTAAAAAGGACAAAGAACCCAAAGAAGAAGTTAAGAGCTTCATGGATCGAAAGAAGGGATTTA
 CAGAAGTTAAGTCGCAGAATGGAGAATTCATGACCCACAAACTTAAACATACTGAGAATACTTTACGCCG
 CCCTGGAGGGAGGGCCAGCGTGGACACCAAGGAGGCTGAGGGCGCCCCCAGGTGGAAGCCGGCAAAAGG
 CTGGAGGAGCTTCGTCGTCGTCGCGGGGAGACCGAGAGCGAAGAGTTCGAGAAGCTCAAACAGAAGCAGC
 AGGAGGCGGCTTTGGAGCTGGAGGAACCAAGAAAAAGAGGGAGGAGAGAAGGAAGTCTGGAGGAGGA
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 ATGACAAGAAACCATTCAAGTGTTCACCTCTCACTCTCAAGATAGAAGAGCGAGCAGATT
 TTTGAATAAGTCTGTGCAGAAAAGCAGTGGTGTCAAATCGACCCATCAAGCAGCAATAGTCTCAAAGATT
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 TTCATCCCCACTGCAGCAGGCACACCAATAAGGAAACTGCTGGCTTGAAGGTAGGGGTTTCTAGCCGC
 ATCAATGAATGGCTAACTAAAACCCAGATGGAAACAAGTCACCTGCTCCCAACCTTCTGACTTGAGAC
 CAGGAGACGTATCCAGCAAGCGGAACCTCTGGGAAAAGCAATCTGTGGATAAGGTCACTTCCCCACTAA
 GGTT

ACGCGTACGCGGCCGCTCGAG – GFP Tag – GTTTAA

Protein Sequence:

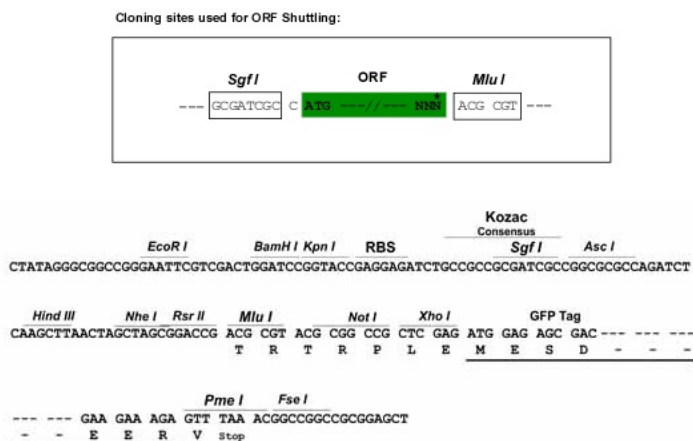
>RG204489 representing NM_004342
 Red=Cloning site Green=Tags(s)

MDDFERRRELRRQKREEMRLEAERIAIYQRNDDEEEAARERRRRARQERLRQKQEEESLQVTDQVEVNA
 QNSVPDEEAKTTTTNTQVEGDDEAAFLERLARREERRQKRLQEALERQKEFDPTITDASLSLPSRRMQND
 TAENETTEKEEKSESRQERYEIEETETVTKSYQKNDWRDAENKKEDKEKEEEEEKPKRGSIGENQIKD
 EKIKKDKPEKKEVKSFMDRKKGFTEVKSQNGEFMTHKLKHTENTFSRPGGRASVDTKEAEGAPQVEAGKR
 LEELRRRRGETESEEFELKQKQQAALALEELKKKREERRKVLQEEQRRKQEEADRKLREEEKRRLLK
 EEIERRRAEAAEKRQKMPEDGLSDDKPKFKCTPKGSSLKIEERAFLNKSQKSSGVKSTHQAIVSKI
 DSRLEQYTSIAIEGTKSAKPTKPAASDLVPAEAGVRNIKSMWEKGNVFSPTAAGTPNKETAGLKVGVSSR
 INEWLTKTPDGNKSPAPKPSDLRPGDVSSKRNLWEKQSVDKVTSPTKV

TRTRPLE – GFP Tag – V

Restriction Sites:

Sgfl-MluI

Cloning Scheme:


ACCN: NM_004342

ORF Size: 1614 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_004342.7](#)

RefSeq Size: 4476 bp

RefSeq ORF: 1617 bp

Locus ID: 800

UniProt ID: [Q05682](#)

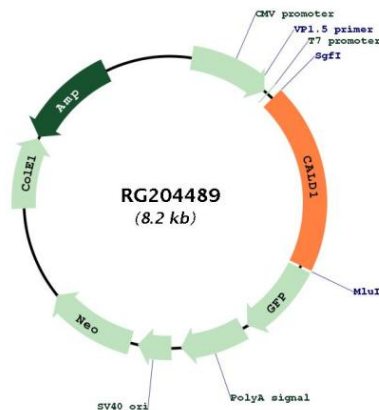
Cytogenetics: 7q33

Domains: Caldesmon

Protein Pathways: Vascular smooth muscle contraction

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 RG204489