

Product datasheet for **RG214296**

Caldesmon (CALD1) (NM_033140) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Caldesmon (CALD1) (NM_033140) 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:

>RG214296 representing NM_033140
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGATCGCC**

ATGCTGGTGGATCCGGATCGCATGGAAGACGCAGCCTGGCCGCGCTCTCCCAAATCGCCTACCAGAGGA
 ATGACGATGATGAAGAGGAGGCAGCCCGGAACCGCGCCGCCAGCCCGACAGGAACGGCTGCGGCAGAA
 GCAGGAGGAAGAATCCTTGGGACAGGTGACCGACCAGGTGGAGGTGAATGCCAGAACAGTGTGCCTGAC
 GAGGAGGCCAAGACAACCACCACAAACTCAAGTGAAGGGGATGATGAGGCCGATTCTGGAGCGCC
 TGGCTCGGCGTGAGGAAAGACGCCAAAAACGCCTTCAGGAGGCTCTGGAGCGCAGAAGGAGTTCGACCC
 AACAAACAGATGCAAGTCTGTCGCTCCCAAGCAGAAGAATGCAAAATGACACAGCAGAAAATGAACT
 ACCGAGAAGGAAGAAAAAGTGAAGTCGCCAAGAAAGATACGAGATAGAGGAAACAGAACAGTCACCA
 AGTCTACCAGAAGAATGATTGGAGGGATGCTGAAGAAAAACAAGAAAGACAAAGGAAAGGAGGAGGA
 GGAAGAGGAGAAGCCAAAGCGAGGGAGCATTGGAGAAAAATCAGATCAAAGATGAAAAGATAAAAAGGAC
 AAGAACCCTAAAGAAGTAAAGAGCTTCATGGATCGAAAGAAGGGATTACAGAAGTTAAGTCGCAGA
 ATGGAGAATTCATGACCCACAACTTAAACATACTGAGAATACTTTCAGCCGCCCTGGAGGGAGGGCCAG
 CGTGGACACCAAGGAGGCTGAGGGCGCCCCCAGGTGGAAGCCGGCAAAAGGCTGGAGGAGCTTCGTCGT
 CGTCGCGGGGAGACCGAGAGCGAAGAGTTCGAGAAGCTCAAACAGAAGCAGCAGGAGGCGGCTTGGAGC
 TGGAGGAACTCAAGAAAAAGAGGGAGGAGAGAAGGAAGTCTGGAGGAGGAAGAGCAGAGGAGGAAGCA
 GGAGGAAGCCGATCGAAAACAGAGAGGAGGAAGAGAAGAGGAGGCTAAAGGAAGAGATTGAAAGGCGA
 AGAGCAAGAGCTGCTGAGAAACGCCAGAAGATGCCAGAAGATGGCTTGTGATGACAAGAAACCATTCA
 AGTGTCTCACTCTAAAGTTTCATCTCTCAAGATAGAAGAGCGAGCAGAATTTTTGAATAAGTCTGTGCA
 GAAAAGCAGTGGTGTCAAATCGACCCATCAAGCAGCAATAGTCTCAAGATTGACAGCAGACTGGAGCAG
 TATACAGTGCAATTGAGGGAACAAAAAGCGCAAAACCTACAAAGCCGGCAGCCTCGGATCTTCTGTTT
 CTGCTGAAGGTGTACGCAACATCAAGAGTATGTGGGAGAAAGGAATGTGTTTTTCACTCCCCACTGCAGC
 AGGCACACCAAATAAGGAAACTGCTGGCTTGAAGGTAGGGGTTTCTAGCCGCATCAATGAATGGCTAACT
 AAAACCCAGATGGAAACAAGTCACCTGCTCCCAAACCTTCTGACTTGAGACCAGGAGACGTATCCAGCA
 AGCGGAACCTCTGGGAAAGCAATCTGTGGATAAGTCACTTCCCCACTAAGTT

ACGCGTACGCGGCCGCTCGAG – GFP Tag – GTTTAA

Protein Sequence:

>RG214296 representing NM_033140
 Red=Cloning site Green=Tags(s)

MLGGSGSHGRRSLAALSQIAYQRNDDDEEEAARERRRRARQERLRQKQEEESLQVTDQVEVNAQNSVPD
 EEAKTTTTNTQVEGDDEAAFLERLARREERRQKRLQEALERQKEFDPTITDASLSLPSRRMQNDTAENET
 TEKEEKSESRQERYEIEETETVTKSYQKNDWRDAEENKKEDEKEEEEEKPKRGSIGENQIKDEKIKKD
 KEPKEEVKSFMDRKKGFTEVKSQNGEFMTHKLKHTENTFSRPGGRASVDTKEAEGAPQVEAGKRLEELRR
 RRGETESEEFELKQKQQAALALEELKKREERRKVLVEEQRRKQEEADRKLREEEEKRRLKEEIERR
 RAEAAEKRQKMPEDGLSDDKKPFKFTPKGSSLKIEERAFLNKSQKSSGVKSTHQAIVSKIDSRLAQ
 YTSAIEGTKSAKPTKPAASDLVPAEGVRNIKSMWEKGNVSSPTAAGTPNKETAGLKVGVSRRINELWT
 KTPDGNKSPAPKPSDLRPGDVSSKRNLWEKQSVDKVTSPTKV

TRTRPLE – GFP Tag – V

Restriction Sites:

Sgfl-Mlul

Cloning Scheme:


ACCN: NM_033140

ORF Size: 1596 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_033140.4](#)

RefSeq Size: 4204 bp

RefSeq ORF: 1599 bp

Locus ID: 800

UniProt ID: [Q05682](#)

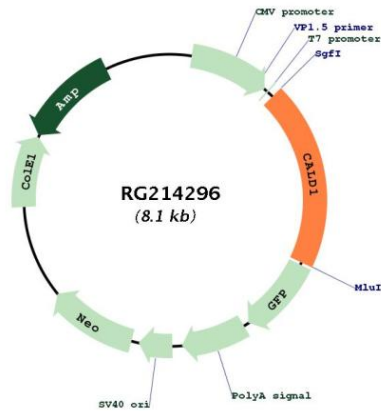
Cytogenetics: 7q33

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 RG214296