

## Product datasheet for **SC127518**

### Caldesmon (CALD1) (NM\_033138) Human Untagged Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Caldesmon (CALD1) (NM_033138) Human Untagged Clone
Tag:	Tag Free
Symbol:	Caldesmon
Synonyms:	CDM; H-CAD; HCAD; L-CAD; LCAD; NAG22
Mammalian Cell Selection:	None
Vector:	<u><a href="#">pCMV6-XL4</a></u>
E. coli Selection:	Ampicillin (100 ug/mL)



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**Fully Sequenced ORF:** >NCBI ORF sequence for NM\_033138, the custom clone sequence may differ by one or more nucleotides

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GAATTCGGCACSAGCTTGTCTCTGGCTGTGCTCTGCTTAAAGAAATCAGTCCTTCTTTCCGACTTAG
TCCTCGGGAAGAAGTTTCAGACTACAAGGTATCATTGGAACATTTCAAGATCATCAAATCAAATTCACA
GGGATTGGTGACCAACCAGAAGGCTCAGACATCTGATTGCTGACCTGTCCAGACATCATGGTCTCCCT
GAACCTGAAATCACACCATGGATGATTTTGAGCGTCGCAGAGAAGCTTAGAAGGCAAAAAGGGAGGAGAT
GCGACTCGAAGCAGAAAAGATCGCTACCAGAGGAATGACGATGATGAAGAGGAGGCAGCCCGGGAACGG
CGCCGCCGAGCCGACAGGAACGGCTGCGGCAGAAAGCAGGAGGAAGAATCCTTGGGACAGGTGACCGACC
AGGTGGAGGTGAATGCCAAGACAGTGTGCTGACGAGGAGGCCAAGACAACCACCACAAACACTCAAGT
GGAAGGGGATGATGAGGCCGATTCCTGGAGCGCTGGCTCGGCGTGAGGAAAGACGCCAAAAACGCTT
CAGGAGGCTCTGGAGCGGCAGAAGGAGTTCGACCCAACAATAACAGATGCAAGTCTGTGCTCCCAAGCA
GAAGAATGCAAAATGACACAGCAGAAAAAGAACTACCGAGAAGGAAGAAAAAGTGAAAGTCCCAAGA
AAGATACGAGATAGAGGAACAGAAACAGTCACCAAGTCTACCAGAAGAATGATTGGAGGGATGCTGAA
GAAAACAAGAAAAGACAAGGAAAAGGAGGAGGAAGAGGAGAAGCCAAAGCGAGGGAGCATTGGAG
AAAATCAGGTAGAGGTGATGGTGAAGGAGAAAAACAAGTAAAGCCAGGAGGAAACAGTGGTAAATGTCATT
AAAAATGGGCAGATCAGTTCAGAAGAGCCTAAACAAGAGGAGGAGGGAAACAAGTTCAGATGAGATT
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AAAAGGCAGCAGAGGAGAGGCAGAGGATAAAGGAGGAAGAGAAAAGGCAGCAGAGGAGAGGCAGAGGA
TAAAGGAGGAAGAGAAAAGGGCAGCAGAGGAGAGGAGGAGGATAAAAGAGGAAGAGAAAAGGCAGCAGA
GGAGAGGCAAAAGGCCAGGGCAGAGGAGGAAGAGAAGGCTAAGGTAGAAGAGCAGAAACGTAACAAGCAG
CTAGAAGAGAAAAACGTGCCATGCAAGAGACAAAGATAAAAGGGGAAAAGGTAGAACAGAAAAATAGAAG
GGAATGGGTAATGAAAAGAAAGCACAAGAAGATAAACTTCAGACAGCTGTCTAAAGAAACAGGGAGA
AGAGAAGGGAAGTAAAGTGAAGCTAAAAGAGAAAAGCTCCAAGAAGACAAGCCTACCTTCAAAAAAGAA
GAGATCAAAGATGAAAAGATTAAAAGGACAAAGAACCCAAAGAAGAAGTTAAGAGCTTCATGGATCGAA
AGAAGGGATTTACAGAAGTTAAGTCGCAGAATGGAGAATTCATGACCCACAAACTTAAACATACTGAGAA
TACTTTCAGCCGCCCTGGAGGGAGGGCCAGCGTGGACACCAAGGAGGCTGAGGGCCCCCCAGGTGGAA
GCCGGCAAAAGGCTGGAGGAGCTTCGTCTGTCGTCGCGGGGAGACCAGAGCGAAGAGTTCGAGAAGCTCA
AACAGAAGCAGCAGGAGGCGGCTTTGGAGCTGGAGGAAGTCAAGAAAAAGAGGGAGGAGAGAAGGAAGGT
CCTGGAGGAGGAAGAGCAGAGGAGGAAGCAGGAGGAAGCCGATCGAAAACCTCAGAGAGGAGGAAGAGAAG
AGGAGGCTAAAGGAAGAGATTGAAAGGCGAAGAGCAGAAGCTGTGAGAAAACGCCAGAAGATGCCAGAAG
ATGGCTTGTGATGACAAGAAACATTCAAGTGTTCCTCCTAAAGTTCATCTCTCAAGATAGAAGA
GCGAGCAGAAATTTTGAATAAGTCTGTGCAGAAAAGCAGTGGTGTCAAATCGACCCATCAAGCAGCAATA
GTCTCAAAGATTGACAGCAGACTGGAGCAGTATACCAGTGAATGAGGGAAACAAAAAGCGCAAAACCTA
CAAAGCCGGCAGCCTCGGATCTTCCTGTTCCTGCTGAAGGTGTACGCAACATCAAGAGTATGTGGGAGAA
AGGGAATGTGTTTTCATCCCCACTGCAGCAGGCACACCAATAAGGAACTGCTGGCTTGAAGGTAGGG
GTTTCTAGCCGCATCAATGAATGGCTAACTAAAACCCAGATGGAACAAGTCACTGCTCCCAACCTT
CTGACTTGAGACCAGGAGACGTATCCAGCAAGCGGAACCTCTGGGAAAAGCAATCTGTGGATAAGGTCAC
TTCCCCACTAAGGTTTGAGAC
```

**5' Read Nucleotide Sequence:**

>OriGene 5' read for NM\_033138 unedited  
 GGCCGCGAATTCGGCACCAGCTTCTCTGGCTGTGCTCCTGCTTAAAGAAATCAGTCC  
 TTCCTTCCGACTTAGTCTCGGGAAGAAGTTTCAGACTACAAGGTATCATTGGAACATT  
 TCAAGATCATCAAATCAAATCCACAGGGATTGGTGACCAACCAGAAGGCTCAGACATCT  
 GATTGCTGACCTGTCCAGACATCATCTGGTCTCCCTGAACCTGAAATCACACCATGGATG  
 ATTTTGAGCGTCGCAGAGAAGCTTAGAAGGCAAAAGAGGGAGGAGATGCGACTCGAAGCAG  
 AAAGAATCGCCTACCAGAGGAATGACGATGATGAAGAGGAGGCAGCCCGGGAACGGCGCC  
 GCCGAGCCCGACAGGAACGGCTGCGGCAGAAGCAGGAGGAAGAATCCTTGGGACAGGTGA  
 CCGACCAGGTGGAGTGAATGCCAGAACAGTGTGCCTGACGAGGAGGCCAAGACAACCA  
 CCACAAACTCAAGTGAAGGGGATGATGAGGCCGATTCTGGAGCGCCTGGCTCGGC  
 GTGAGGAAAGACGCCAAANACGCCTTCAGGAGGCTCTGGAGCGGCAGAAGGAGTTCGACC  
 CAACAATAACAGATGCAAGTCTGTCTGCCAAGCAGAAGAATGCAAAATGACACAGCAG  
 AAAATGAACTACCGAGAAGGAAGAAAAAGTAAAGTCGCCAAGAAAGATACGAGATAG  
 AGGAAACAGAAACAGTCAACCAAG

**3' Read Nucleotide Sequence:**

>OriGene 3' read for NM\_033138 unedited  
 CATTGCTGTGACCGCGGCCGCAATCTAGACCCGAGCTTTTTTTTTTTTTTTTTTTTTT  
 TTTTTTTTTTGCAGGAAGGAATTCATTTATTGGGGATGCATTTTCACAATATATGTTA  
 TTGGAGCGATCCATTATCAGTGAAAAGTATCAAGTGTATATAAAATTTTAGGAATGGCA  
 GATTCACAGAACATGCTAGTCAGCTTGCAGTTTTACCTTGTAAGATAACAGAGAATTAT  
 AGTCTAACAGTAACAAGGAATTTACTTTTTCAAAGATTAATCCAACTGAACAAAAT  
 TTTACCCTAAAACCTTACTCCATCCAAATATTGGAATAAAAGTCAGCAGTGATACATCTT  
 TTTTGAACTTTAGATTTCTAGAAAAATATGTAATAGTGATCAGGAGGAGCTTTTGTTC  
 AAAGTACCACCAAGCAATGTTACCTTACCATAGGCCTTAATTCAACTTTGATCCATTTT  
 ACTCCAATGACGGGCGTCAATGCTACCTGGGACTTGTATTTGTAATACTGATTTAGC  
 TTATTGGAGACTTGTGCCTACTTTGTCATGAGGGTTTGACTTCTGCATTCTTCGNGGCTT  
 TCCTTCCTTTGGCTTAGGTTTGTAAAGCTAGAAGATTCATTGCTTTTACAGACTTAT  
 GAGGAAAATACCCTTTGCATCGCAGAAGTCCCTTTTCAAGGCACCCCTGCCCTGGTTAGC  
 TTTTTTTGGGAGAAACCTGCCGATTAACCACAACCATACTTCGGGCGGCTCCCTCCCGGT  
 GTCACGAAACTGACCACCCCCACCCTTGTAAATCCCCTTGACCATGAATCTATGCCACC  
 CCCCTGTTGCACCCCTTTTATCAAATTTTTGCCCCCAATTTGGCACCCCTCTATTTTC  
 TTCTGGGACACAATCATTCTCGGCTTACGACCCCGCACTCCTCGG

**Restriction Sites:**

NotI-NotI

**ACCN:**

NM\_033138

**Insert Size:**

4860 bp

**OTI Disclaimer:**

Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).

**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).

<b>Reconstitution Method:</b>	<ol style="list-style-type: none"><li>1. Centrifuge at 5,000xg for 5min.</li><li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li><li>3. Close the tube and incubate for 10 minutes at room temperature.</li><li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li><li>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.</li></ol>
<b>RefSeq:</b>	<a href="#">NM_033138.2</a> , <a href="#">NP_149129.2</a>
<b>RefSeq Size:</b>	5241 bp
<b>RefSeq ORF:</b>	5241 bp
<b>Locus ID:</b>	800
<b>UniProt ID:</b>	<a href="#">Q05682</a>
<b>Cytogenetics:</b>	7q33
<b>Domains:</b>	Caldesmon
<b>Protein Pathways:</b>	Vascular smooth muscle contraction
<b>Gene Summary:</b>	<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> <p>Transcript Variant: This variant (1) encodes the longest isoform (1, also known as aorta h-CaD). It is predominantly expressed in smooth muscle tissues.</p>