

Product datasheet for **RG223989**

Caldesmon (CALD1) (NM_033157) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Caldesmon (CALD1) (NM_033157) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	CALD1
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:

>RG223989 representing NM_033157
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGCATCGCC**

ATGGATGATTTTGAGCGTCGCAGAGAAGCTTAGAAGGCCAAAAGAGGGAGGAGATGCGACTCGAAGCAGAAA
 GAATCGCCTACCAGAGGAATGACGATGATGAAGAGGAGGCAGCCGGGAACGGCGCCGCCGAGCCGACA
 GGAACGGCTGCGGCAGAAGCAGGAGGAAGAATCCTTGGGACAGGTGACCGACCAGGTGGAGGTGAATGCC
 CAGAACAGTGTGCTGACGAGGAGGCCAAGACAACCACCACAAACTCAAGTGAAGGGGATGATGAGG
 CCGCATTCTGGAGCGCCTGGCTCGGCGTGAGGAAAGACGCCAAAAACGCCTTCAGGAGGCTCTGGAGCG
 GCAGAAGGAGTTCGACCAACAATAACAGATGCAAGTCTGTGCTCCCAAGCAGAAGAATGCAAAATGAC
 ACAGCAGAAAATGAACTACCGAGAAGGAAGAAAAAGTGAAGTCCCAAGAAAGATACGAGATAGAGG
 AAACAGAAACAGTCACCAAGTCTACCAGAAGAATGATTGGAGGGATGCTGAAGAAAACAAGAAAGAAGA
 CAAGGAAAAGGAGGAGGAGAAGAGGAGAAAGCCAAAGCGAGGGAGCATTGGAGAAAATCAGGGAGAAGAG
 AAGGGAATCAAAGTGAAGCTAAAAGAGAAAAGCTCCAAGAAGACAAGCCTACCTTCAAAAAAGAAGAGA
 TCAAAGATGAAAAGATTAAGGACAAAAGAACCCAAAGAAGAAGTTAAGAGCTTCATGGATCGAAAAGAA
 GGGATTTACAGAAGTTAAGTCGCAGAATGGAGAATTCATGACCCACAACTTAAACATACTGAGAATACT
 TTCAGCCGCCCTGGAGGGAGGGCCAGCGTGGACACCAAGGAGGCTGAGGGCGCCCCCAGGTGGAAGCCG
 GCAAAAGGCTGGAGGAGCTTCGTCGTCGTCGCGGGGAGACCGAGAGCGAAGAGTTCGAGAAGCTCAACA
 GAAGCAGCAGGAGGCGCTTTGGAGCTGGAGGAACTCAAGAAAAAGAGGGAGGAGAGAAGGAAGTCCCTG
 GAGGAGGAAGAGCAGAGGAGGAAGCAGGAGGAAGCCGATCGAAAACCTCAGAGAGGAGGAAGAGAAGGA
 GGCTAAAGGAAGAGATTGAAAGGCGAAGAGCAGAAGCTGCTGAGAAAACGCCAGAAGATGCCAGAAGATGG
 CTGTGCAGATGACAAGAACCATTCAAGTGTTCCTACTCCTAAAGTTTCTCTCAAGATAGAAGAGCGA
 GCAGAATTTTTGAATAAGTCTGTGCAGAAAAGCAGTGGTGTCAAATCGACCCATCAAGCAGCAATAGTCT
 CCAAGATTGACAGCAGACTGGAGCAGTATACCAGTGAATTGAGGGAACAAAAAGCGCAAAACCTACAAA
 GCCGCGAGCCTCGGATCTTCTGTTCTGCTGAAGGTGTACGCAACATCAAGAGTATGTGGGAGAAAGGG
 AATGTGTTTTTATCCCCACTGCAGCAGGCACACCAAATAAGGAACTGCTGGCTTGAAGGTAGGGGTTT
 CTAGCCGATCAATGAATGGCTAACTAAAACCCAGATGGAAACAAGTCACTGCTCCCAAACTTCTGA
 CTTGAGACCAGGAGACGTATCCAGCAAGCGGAACCTCTGGGAAAAGCAATCTGTGGATAAGGTCACTTCC
 CCCACTAAGTT

ACGCGTACGCGGCCGCTCGAG – GFP Tag – **GTTTAA**

Protein Sequence:

>RG223989 representing NM_033157
 Red=Cloning site Green=Tags(s)

MDDFERRRELRRQKREEMRLEAERIAIYQRNDDDEEEAARERRRRARQERLRQKQEEESLQVTDQVEVNA
 QNSVPEEAKTTTTNTQVEGDDEAAFLERLARREERRQKRLQEALERQKEFDPTITDASLSLPSRRMQND
 TAENETTEKEEKSESRQERYEIEETETVTKSYQKNDWRDAEENKKEDEKEEEEEEEKPKRGSIGENQGEE
 KGTKVQAKREKLQEDKPTFKKEEIKDEKIKKDKPEKEVKSFMDRKKGFTEVKSQNGEFMTHLKHKTENT
 FSRPGGRASVDTKEAEGAPQVEAGKRLEELRRRRGETESEEFELKQKQQAALLEEELKKKREERRKVL
 EEEEQRRKQEEADRKLREEEEKRRLKEEIERRRAEAAEKRQKMPEDGLSDDKPKFCFTPKGSSLKIEER
 AEFLNKSQKSSGVKSTHQAIVSKIDSRLEQYTS AIEGTKSAKPTKPAASDLPVPAEGVRNIKSMWEKG
 NVFSSPTAAGTPNKETAGLKVGVS SRINELWTKTPDGNKSPAPKPSDLRPGDVSSKRNLWEKQSVDKVTS
 PTKV

TRTRPLE – GFP Tag – **V**

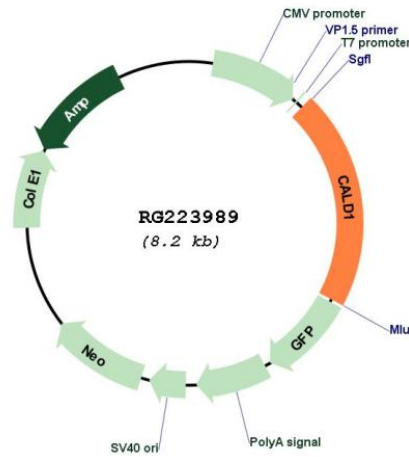
Restriction Sites:

SgfI-MluI

Cloning Scheme:



Plasmid Map:



ACCN: NM_033157

ORF Size: 1692 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:	<ol style="list-style-type: none">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_033157.2 , NP_149347.1
RefSeq Size:	4546 bp
RefSeq ORF:	1692 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]