

Product datasheet for RC204696

CASQ1 (NM_001231) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	CASQ1 (NM_001231) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	CASQ1
Synonyms:	CASQ; PDIB1; VMCQA
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC204696 ORF sequence Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCCGCCGCGATCGCC

ATGGGGCCAGAGCTGTGCCGGTCTGCGGCTGGCACTGCTGTTGCTGCTGGTGTAGGGACACCCAAGT
CAGGGGTACAGGGGCAGGAAGGGCTGGACTTCCCTGAGTACGATGGTGTGGACCGTGTGATCAATGTCAA
TGCAAAGAACAACAAGAATGTGTTCAAGAAGTATGAGGTGCTGGCACTCCTTACCATGAACCCCCGAG
GATGACAAAGCCCTACAAAGACAATTTGAGATGGAGGAGCTGATCCTGGAGTTAGCAGCCCAAGTCTAG
AAGACAAGGGTGTGGCTTCGGGCTGGTAGACTCTGAGAAGGATGCAGCTGTGGCCAAGAACTAGGCCT
AACTGAAGTGGACAGCATGTATGTATTCAGGGGAGATGAAGTCATTGAGTACGATGGCGAGTTTTCTGCT
GACACCATCGTGGAGTTTCTGCTTGATGTCTTAGAGGACCTGTGGAATTGATTGAAGGTGAACGAGAGC
TGCAGGCGTTTGAGAATATTGAGGATGAGATCAAACCTATTGGCTACTTCAAGAGCAAAGACTCAGAGCA
TTCAAAGCCTTCGAGGATGCAGCTGAGGAGTTTCATCCCTACATCCCCTTCTTCGCCACCTTCGACAGC
AAGGTGGCAAAGAAGCTGACCCTGAAGCTGAATGAGATTGATTTCTACGAGGCCTTCATGGAAGAGCCTG
TGACCATCCAGACAAGCCCAATAGCGAAGAGGAGATTGTCAACTTCGTGGAGGAGCACAGGAGATCAAC
CCTGAGGAAACTGAAGCCGGAGAGTATGTATGAGACCTGGGAGGATGATATGGATGGAATCCACATTGTG
GCCTTCGAGAGGAAGCTGATCCTGATGGTTTCGAGTTCTTAGAGACTCTCAAGGCTGTGGCCCAAGATA
ACACTGAAAACCCAGATCTTAGCATCATCTGGATTGACCCTGATGACTTCCCCCTGCTGGTCCCATCTG
GGAGAAGACGTTTGACATCGACTTGTACGCCCCAATAAGGAGTCGTCAATGTTACTGATGCGGATAGC
GTATGGATGGAATGGACGATGAGGAGGACCTGCCTTCTGCTGAGGAGCTGGAGGACTGGCTGGAGGATG
TCCTGGAGGGCGAGATCAACACAGAGGACGATGACGATGATGATGAC

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA



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Protein Sequence: >RC204696 protein sequence
 Red=Cloning site Green=Tags(s)

MGPRAVPLRLALLLLVLGTPKSGVQGGQEGLDLDFPEYDGVDRVINVNAKYNKRVFKKYEVLLALLYHEPPE
 DDKASQRQFEMEELILELAAQVLEDKGVGFGLDVSEKDAAVAKKLGLETVDSMYVFKGDEVIEYDGEFSA
 DTIVEFLLDVLEDPVELIEGERELQAFENIEDEIKLIGYFKSKDSEHYKAFEDAAEEFHPYIPFFATFDS
 KVAKKLTLLKLEIDFYEAFMEEPVTIPDKPNSEEEIVNFVEEHRSTLRKLPESMYETWEDDMDGIHIV
 AFAEADPDGFEFLTLKAVAQDNTENPDLSEIIWIDPDDFPLLVPYWEKTFDIDL SAPQIGVNVVTDADS
 VVMEMDDEEDLP SAELEDWLEDVLEGEINTEDDDDDDDD

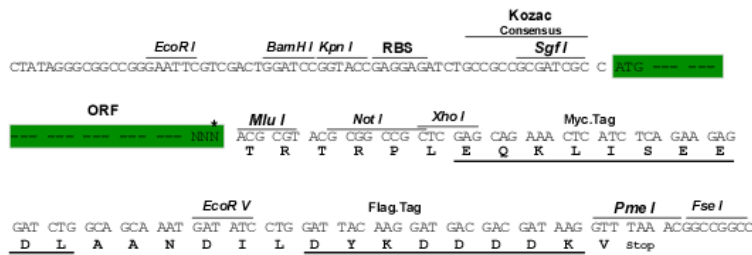
TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk6068_d06.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:

Cloning sites used for ORF Shuttling:



* The last codon before the Stop codon of the ORF

ACCN: NM_001231

ORF Size: 1170 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_001231.3](#), [NP_001222.2](#)

RefSeq Size: 1993 bp

RefSeq ORF: 1191 bp

Locus ID: 844

UniProt ID: [P31415](#)

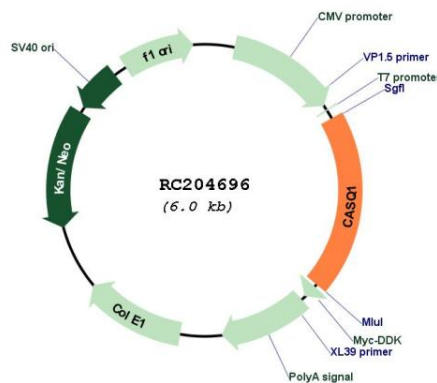
Cytogenetics: 1q23.2

Domains: Calsequestrin

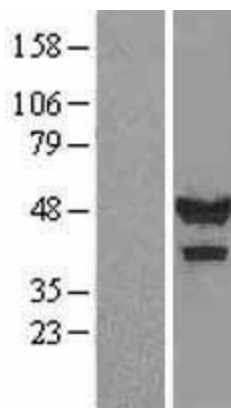
MW: 44.5 kDa

Gene Summary: This gene encodes the skeletal muscle specific member of the calsequestrin protein family. Calsequestrin functions as a luminal sarcoplasmic reticulum calcium sensor in both cardiac and skeletal muscle cells. This protein, also known as calmitine, functions as a calcium regulator in the mitochondria of skeletal muscle. This protein is absent in patients with Duchenne and Becker types of muscular dystrophy. [provided by RefSeq, Jun 2013]

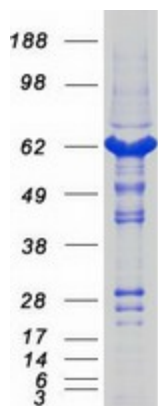
Product images:



Circular map for RC204696



Western blot validation of overexpression lysate (Cat# [LY420059]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC204696 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified CASQ1 protein (Cat# [TP304696]). The protein was produced from HEK293T cells transfected with CASQ1 cDNA clone (Cat# RC204696) using MegaTran 2.0 (Cat# [TT210002]).