

Product datasheet for **RC221186**

Calpain 3 (CAPN3) (NM_173088) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Calpain 3 (CAPN3) (NM_173088) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Calpain 3
Synonyms:	CANP3; CANPL3; LGMD2; LGMD2A; LGMDD4; LGMDR1; nCL-1; p94
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC221186 representing NM_173088 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGCACGGGAACAAGCAGCACCTGCAGAAGGACTTCTTCCTGTACAACGCCTCCAAGGCCAGGAGCAAAA
CCTACATCAACATGCGGGAGGTGTCCCAGCGCTTCCGCCTGCCTCCCAGCGAGTACGTATCGTGCCCTC
CACCTACGAGCCCACCAGGAGGGGAATTCATCCTCCGGTCTTCTCTGAAAAGAGGAACCTCTCTGAG
GAAGTTGAAAATACCATCTCCGTGGATCGGCCAGTGAAAAAGAAAAAACCAAGCCCATCATCTTCGTTT
CGGACAGAGCAAACAGCAACAAGGAGCTGGGTGTGGACCAGGAGTCAGAGGAGGGCAAAGGCAAAACAAG
CCCTGATAAGCAAAAGCAGTCCCCACAGCCACAGCCTGGCAGCTCTGATCAGGAAAGTGAGGAACAGCAA
CAATTCGGAAACATTTTCAAGCAGATAGCAGGAGATGACATGGAGATCTGTGCAGATGAGCTCAAGAAGG
TCCTTAACACAGTCGTGAACAAACAAGGACCTGAAGACACACGGGTTCACTGGAGTCTGCGGTAG
CATGATTGCGCTCATGGATACAGATGGCTCTGGAAAGCTAACCTGCAGGAGTCCACCACCTCTGGAAC
AAGATTAAGGCCCTGGCAGAAAATTTTCAAACACTATGACACAGACCAGTCCGGCACCATCAACAGCTACG
AGATGCGAAATGCAGTCAACGACGAGGATTCCACCTCAACAACCAGCTCTATGACATCATTACCATGCG
GTACGCAGACAAACACATGAACATCGACTTTGACAGTTTCATCTGCTGCTTCGTTAGGCTGGAGGGCATG
TTCAGAGCTTTTCATGCATTTGACAAGGATGGAGATGGTATCATCAAGCTCAACGTTCTGGAGTGGCTGC
AGCTCACCATGTATGCC

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA



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Protein Sequence: >RC221186 representing NM_173088
Red=Cloning site Green=Tags(s)

MHGKQHLQKDFFLYNASKARSKTYINMREVSQRFRLPPSEYVIVPSTYEPHQEGEFILRVFSEKRNLSE
 EVENTISVDRPVKTKPIIFVSDRANSNKELGVDQESEEGKGTSPDKQKQSPQPQPGSSDQESEEQQ
 QFRNIFKQIAGDDMEICADELKKVLNTVVKHKDLKTHGFTLESCRSMIALMDDTGGSKLNLQEFHHLWN
 KIKAWQKIFKHYPDQSGTINSYEMRNAVNDAGFHLNNQLYDIIITMRYADKHMNIDFDSFICCFVRLEGM
 FRAFHFADKDDGGIIKLVLEWLQLTMYA

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk8051_a02.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_173088

ORF Size: 927 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_173088.1](#), [NP_775111.1](#)

RefSeq Size: 1661 bp

RefSeq ORF: 930 bp

Locus ID: 825

UniProt ID: [P20807](#)

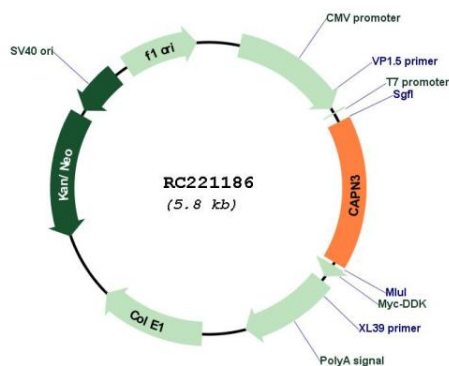
Cytogenetics: 15q15.1

Protein Families: Druggable Genome, Protease

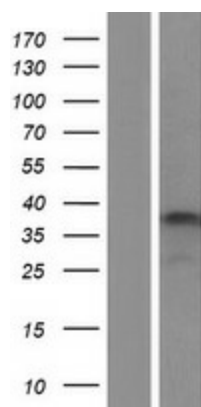
MW: 35.7 kDa

Gene Summary: Calpain, a heterodimer consisting of a large and a small subunit, is a major intracellular protease, although its function has not been well established. This gene encodes a muscle-specific member of the calpain large subunit family that specifically binds to titin. Mutations in this gene are associated with limb-girdle muscular dystrophies type 2A. Alternate promoters and alternative splicing result in multiple transcript variants encoding different isoforms and some variants are ubiquitously expressed. [provided by RefSeq, Jul 2008]

Product images:



Circular map for RC221186



Western blot validation of overexpression lysate (Cat# [LY406684]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC221186 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).