

Product datasheet for **RC202556**

Calpain 10 (CAPN10) (NM_023083) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Calpain 10 (CAPN10) (NM_023083) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Calpain 10
Synonyms:	CANP10; NIDDM1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide Sequence:

>RC202556 ORF sequence
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATCGGGCGGGCCGGGGCGGACGCCGGGAGGGAGCTGTTCCGGGACGCCGCCCTCCCCGCCGGGACT
 CCTCGCTCTTCTGCGACTTGTCTACGCCGCTGGCCAGTTCGCGAGGACATCACGTGGAGGCGGCCCA
 GGAGATTTGTGCCACACCCCGGCTGTTCCAGATGACCCACGGGAAGGGCAGGTGAAGCAGGGGCTGCTG
 GGGATTGCTGGTTCCTGTGTGCCTGCGCCGCGTGCAGAAGAGCAGGCACCTCTGGACCAGGTATTC
 CTCGGGACAGCCGAGCTGGGCCGACCAGGAGTACCGGGCTCCTCACCTGTGCATTTGGCAGTTTGG
 ACGCTGGTGGAGGTGACCACAGATGACCGCTGCCGTGCCTGCAGGGAGACTCTGTTTCTCCCGTGC
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 CGAGTGAGGTGTACATTGCCGCTCCTGCAGAGATCCAGGCTGCACGCGGGGACTGGGCAGGCCGGCCCG
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 CTGCCGGACACAGAGGGGCTTACAGTGACCATCGCAACCAGGATTGACAGGCCATCCATTACAGCC
 AGGAGATGCTGGGCCAGTTCCTCCAAGAGGTCTCCGTCATGGCAGTGATGAAAAC

ACGCGTACGCGGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence: >RC202556 protein sequence
 Red=Cloning site Green=Tags(s)

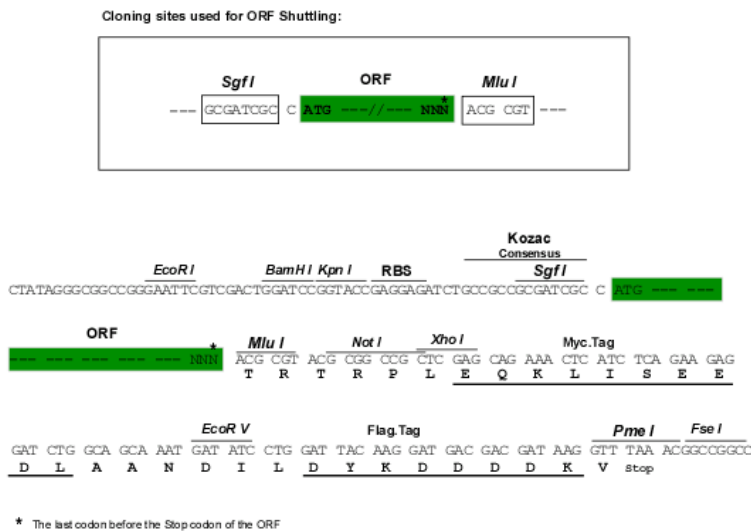
MRAGRGATPARELFRDAAFPAADSSLFCDLSTPLAQFREDITWRRPQEICATPRLFPDDPREGQVKQGLL
 GDCWFLCACAALQKSRHLLDQVIPPQQPSWADQEYRGSFTCRIWQFGRWVEVTTDDRLPCLAGRLCFSRC
 QREDVFWLPLLEKVVYAKVHGSYEHLWAGQVADALVDLTGGLAERWNLKGVAGSGGQDRPGRWEHRTCRQ
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 WSQVDAAVASELLSQLQEGEFWVEEEFLREFDELTVGYPVTEAGHLQSLYTERLLCHTRALPGAWVKGQ
 SAGGCRNNSGFPSNPKFWLRVSEPEVYI AVLQRSRLHAADWAGRARALVGDSTSWSPASIPGKHQYQAV
 GLHLWKVEKRRVNLPRVLSMPVAGTACHAYDREVHLRCELSPGYLAVPSTFLKDAPGEFLRVFSTGR
 VLSAIRAVAKNTTPGAALPAGEWGTVQLRGSWRVGTAGGSRNFASYPTNPCFPF SVPEGPGPRCVRIT
 LHQHCRPSDTEFHPIGFHIFQVPEGGRSQDAPLLLQEPLLSCVPHRYAQEVSRLCLLPAGTYKVPSTY
 LPDTEGAFTVTIATRDRPSIHSQEMLGQFLQEVSVMAVMKT

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk6691_c05.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_023083

ORF Size: 2016 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_023083.1](#), [NP_075571.1](#)

RefSeq Size: 2662 bp

RefSeq ORF: 2019 bp

Locus ID: 11132

UniProt ID: [Q9HC96](#)

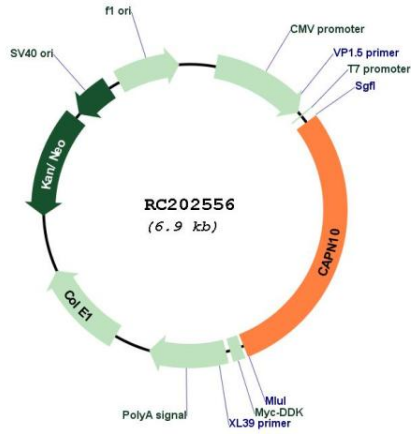
Cytogenetics: 2q37.3

Protein Families: Druggable Genome, Protease

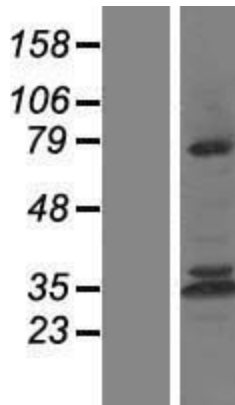
MW: 74.9 kDa

Gene Summary: Calpains represent a ubiquitous, well-conserved family of calcium-dependent cysteine proteases. The calpain proteins are heterodimers consisting of an invariant small subunit and variable large subunits. The large catalytic subunit has four domains: domain I, the N-terminal regulatory domain that is processed upon calpain activation; domain II, the protease domain; domain III, a linker domain of unknown function; and domain IV, the calmodulin-like calcium-binding domain. This gene encodes a large subunit. It is an atypical calpain in that it lacks the calmodulin-like calcium-binding domain and instead has a divergent C-terminal domain. It is similar in organization to calpains 5 and 6. This gene is associated with type 2 or non-insulin-dependent diabetes mellitus (NIDDM), and is located within the NIDDM1 region. Multiple alternative transcript variants have been described for this gene. [provided by RefSeq, Sep 2010]

Product images:



Circular map for RC202556



Western blot validation of overexpression lysate (Cat# [LY411513]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC202556 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).