

## Product datasheet for **RC234758**

### Calpain 1 (CAPN1) (NM\_001198868) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Calpain 1 (CAPN1) (NM_001198868) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Calpain 1
Synonyms:	CANP; CANP1; CANPL1; muCANP; muCL; SPG76
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide  
Sequence:

>RC234758 representing NM\_001198868  
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCCGCGATCGCC

ATGTCGGAGGAGATCATCACGCCGTGTACTGCACTGGGGTGTACAGCCCAAGTCAGAAGCAGCGGGCCA  
GGGAGCTGGGCTGGGCCGCCATGAGAATGCCATCAAGTACCTGGGCCAGGATTATGAGCAGCTGCGGGT  
GCGATGCCTGCAGAGTGGGACCCTCTTCCGTGATGAGGCCTTCCCCCGGTACCCACAGAGCTGGGTAC  
AAGGACCTGGGTCCCAATTCCTCCAAGACCTATGGCATCAAGTGAAGCGTCCCACGGAAGTGTGTCAA  
ACCCCCAGTTCATTGTGGATGGAGCTACCCGCACAGACATCTGCCAGGGAGCACTGGGGACTGCTGGCT  
CTTGGCGGCCATCGCTCCCTCACTCTCAACGACACCCTCTGCACCGAGTGGTCCGCACGGCCAGAGC  
TTCCAGAATGGCTATGCCGGCATCTTCCATTTCCAGCTGTGGCAATTTGGGGAGTGGGTGGACGTGGTGC  
TGGATGACCTGCTGCCCATCAAGGACGGGAAGCTAGTGTTCGTGCACTCTGCCGAAGGCAACGAGTCTG  
GAGCGCCCTGCTTGAAGAAGCCATGCCAAGGTAATGGCAGCTACGAGGCCCTGTCAGGGGGCAGCACC  
TCAGAGGGCTTTGAGGACTTCACAGGCGGGGTTACCGAGTGGTACGAGTTGCGCAAGGCTCCAGTGACC  
TCTACCAGATCATCCTCAAGGCGCTGGAGCGGGGCTCCCTGCTGGGCTGCTCCATAGACATCTCCAGCGT  
TCTAGACATGGAGGCCATCACTTTCAAGAAGTTGGTGAAGGGCCATGCCTACTCTGTGACCGGGGCCAAG  
CAGGTGAACTACCGAGGCCAGGTGGTGAGCCTGATCCGGATGCGGAACCCCTGGGGCAGGTGGAGTGA  
CGGGAGCTGGAGCGACAGCTCCTCAGAGTGAACAACGTGGACCCATATGAACGGGACCAGCTCCGGGT  
CAAGATGGAGGACGGGGAGTTCGGATGTATTCCGAGACTTCATGCGGGAGTTCACCCGCTGGAGATC  
TGCAACCTCACACCCGACGCCCTCAAGAGCCGGACCATCCGCAATGGAACACCACACTCTACGAAGGCA  
CCTGGCGCGGGGAGCACCGCGGGGGCTGCCGAACTACCCAGCCACCTTCTGGGTGAACCTCAGTT  
CAAGATCCGGCTGGATGAGACGGATGACCCGGACGACTACGGGGACCGGAGTCAGGCTGCAGCTTCGTG  
CTCGCCCTTATGCAAGAAGCACCGTCGCCGCGAGCGCCGCTTCGGCCGCGACATGGAGACTATTGGCTTCG  
CGGTCTACGAGGTCCCTCCGGAGCTGGTGGGCCAGCCGGCCGTACACTTGAAGCGTGACTTCTTCTGCG  
CAATGCGTCTCGGGCGCGCTCAGAGCAGTTCATCAACCTGCGAGAGGTGAGCACCCGCTTCGCGCTGCCA  
CCCGGGGAGTATGTGGTGGTGCCTCCACCTTCGAGCCCAACAAGGAGGGGCGACTTCGTGCTGCGCTTCT  
TCTCAGAGAAGAGTGCTGGGACTGTGGAGCTGGATGACCAGATCCAGGCCAATCTCCCGATGAGCAAGT  
GCTCTCAGAAGAGGAGATTGACGAGAATCAAGGCCCTCTTCAGGCAGCTGGCAGGGGAGGACATGGAG  
ATCAGCGTGAAGGAGTTGCGGACAATCCTCAATAGGATCATCAGCAAACAAAGACCTGCGGACCAAGG  
GCTTCAGCCTAGAGTCGTGCCGACGATGGTGAACCTCATGGATCGTGATGGCAATGGGAAGCTGGGCT  
GGTGGAGTTCAACATCCTGTGGAACCGCATCCGGAATTACCTGTCCATCTTCCGGAAGTTTGACCTGGAC  
AAGTCGGGCAGCATGAGTGCCTACGAGATGCGGATGGCCATTGAGTCGGCAGGCTTCAAGCTCAACAAGA  
AGCTGTACGAGCTCATCATACCCGCTACTCGGAGCCGACCTGGCGGTGACTTTGACAATTCGTTTG  
CTGCTGGTGGGCTAGAGACCATGTTCCGATTTTTCAAACCTCTGGACACAGATCTGGATGGAGTTGTG  
ACCTTTGACTTGTAAAGTGGTTGCAGCTGACCATGTTTGCA

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:** >RC234758 representing NM\_001198868  
 Red=Cloning site Green=Tags(s)

MSEEIITPVYCTGVSAQVQKQRARELGLGRHENAICYLGQDYEQLRVRCLSGTLFRDEAFPPVPQSLGY  
 KDLGPNSSKTYGIKWKRPELLESNPQFIVDGAIRTDICQALGDCWLLAAIASLTLNDTLLHRVPHGQS  
 FQNGYAGIFHFQLWQFGEWVDVVDDLLPIKDGKLVFVHSAEGNEFWSALLEKAYAKVNGSYEALSGGST  
 SEGFEFDTGGVTEWYELRKAPSDLYQIILKALERGSLLGCSIDISSVLDMEAITFKKLVKGGHAYSVTGAK  
 QVNYRQGVVSLIRMRNPWGEVEWTGAWSDDSSSEWNNVDPYERDQLRVKMEDGEFWMFRDFMREFTRLEI  
 CNLTPDALKSRTIRKWNTTLYEGTWRRGSTAGGCRNYPATFWVNPQFKIRLDETDDPDDYGDRESGCSFV  
 LALMQKHRRRRFRGRDMETIGFAVVEVPPPELVGQPAVHLKRDFFLANASRARSEQFINLREVSTRFRLP  
 PGEYVVVSTFEPNKEGDFVLRFFSEKSAGTVELDDQIQANLPDEQVLESEEIDENFKALFRQLAGEDME  
 ISVKELRTILNRIISKHKDLRTKGFSLSCRSMVNLMDRDGNGKLGLEFVNILWNRIRNYLSIFRKFDLD  
 KSGSMSAYEMRMAIESAGFKLNKKLYELIITRYSEPD LAVDFDNFVCCLVRL ETMFRFFKLTLDL DGVV  
 TFDLFWLQLTMFA

TRTRPLEQKLI SEEDLAANDILDYKDDDDKV

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**

Cloning sites used for ORF Shuttling:



\* The last codon before the Stop codon of the ORF

**ACCN:** NM\_001198868

**ORF Size:** 2142 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\\_001198868.2](#)

**RefSeq Size:** 3125 bp

**RefSeq ORF:** 2145 bp

**Locus ID:** 823

**UniProt ID:** [P07384](#)

**Cytogenetics:** 11q13.1

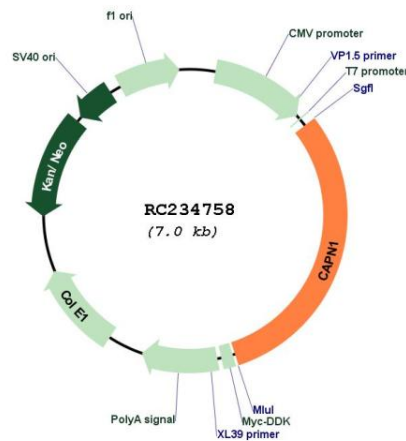
**Protein Families:** Druggable Genome, Protease

**Protein Pathways:** Alzheimer's disease, Apoptosis

**MW:** 82.3 kDa

**Gene Summary:** The calpains, calcium-activated neutral proteases, are nonlysosomal, intracellular cysteine proteases. The mammalian calpains include ubiquitous, stomach-specific, and muscle-specific proteins. The ubiquitous enzymes consist of heterodimers with distinct large, catalytic subunits associated with a common small, regulatory subunit. This gene encodes the large subunit of the ubiquitous enzyme, calpain 1. Several transcript variants encoding two different isoforms have been found for this gene. [provided by RefSeq, Nov 2010]

### Product images:



Circular map for RC234758