

## Product datasheet for **MR230884**

### Cast (NM\_001301156) Mouse Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Cast (NM_001301156) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Cast
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin



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**ORF Nucleotide  
Sequence:**

>MR230884 representing NM\_001301156  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGATCGCC**

ATGAGTACCACAGAGACTAAGGCTGTGAAAACAGAGTCTAAGAAACCACAATCAAGTGAAGCAACCTGTGG  
 TTCACGAGAAAAAGTCAAAGGAGGGCCAAAGGAAGGGTCAGAGCCAAAAATCTCCGAAGCACACATC  
 AAGTACAGGAAGCAAGCATGCTCATAAAGAAAAAGCACTTTCCAGATCAAATGAACAGATGGTGTCAAG  
 AAACCATCAGAATCAAAGACAAAATTTCAAGATGTTCTTCAGCTGGTGGAGAGAGTGTGGCTGGAGGTG  
 GGACTGTGGCCACTGCCTTGGACAAAGTGGTGGTAAGAAAAAGAACAGAAACCATTACACCAGCTTC  
 ACCTGTGCAGTCCACACCGAGCAAGCCATCTGACAAGTCAAGCATGGATGCTGCCTTGGATGACCTGATA  
 GACACCTTAGGTGGACATGAAGATACTAACAGAGATGATCCACCATACTGGACCAGTAGTTTTGGACC  
 CAATGTATTCTACCTACCTTGGGCACTGGGTATAAAAAGAAGGGACTATTCCTCCAGAGTATAGGAACT  
 TTTGGAAAAAATGAAGGGATCACACAACCTCTCCAGACTCTCCTAAACCTATGGGGACTGACCAGGCT  
 ATAGATGCCTTGTGATCTGATTTACCTGTAGTTCTCCAAGTGAAGAAAGCAAGTGAAGAAAGAGAAGTCTA  
 CTGGGGAAATTTCAAAGCTCAGTCTGCAGGAGTGACCAGAAGTTCTGTTCCCCCAAGGAGAAGAAAAAG  
 GAAGGTGGAAGAGGAGGTATAAATGATCAAGCACTTCAGGCTCTGTGAGATTCAGTGGGCAACCCGGCAG  
 CCAGATCTCCGAGCCAGTGTAGCAAGTGAACAAGTCAAAGAGGCAAAAGCAAAAGAAGAAAGGCAGG  
 AGAAGTGTGGTGAAGTGAAGGACACAGTCCCAGCTGAGTACAGGTTAAAACCAGCAAAGGATAAAGATGG  
 AAAACCACTATTGCCAGAGCCTGAAGAAACATCTAAGAGCCTGAGTGAAGTGGAGCTGATGGGGAGCTT  
 TCAGCAGATTTTGACCGATCTACATATCAAGACAAACCTCTACGCCAGCTGAAAAGAAATCCAATGACA  
 CATCCCAAACCTCTCCGGGGAGACTGTGCCCTCGGGCCTCCATGTGCAGTATACGGTCAGCGCCACCCAA  
 ACTAGCATCCTTGAAGGGCGTGGTACCAGAAGATGCTGTTGAAACCTTGGCTGGAAGCCTGGGGACAAGG  
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 AAAACCACTCCTGCCAAAGAATCCCAGGAACAACCTTGCACCCTTAAGCGATGACTTCCTTCTTGATGCC  
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 CCATTTCTGAAGTAGTTTCTCAGACACCTGCTCCAAGCACCCATGCAGCAGCTCCACTGCCTGGCACTGA  
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 GAAGCCACCGACTAAGAAAAAGAGAAACCTGATCAGGACCGGGACCCCATTTGATGCCCTCTCAGAAGAT  
 TTGGATAGCTGCCCTCACTACAGAGACCTCAAAGAATACAGCAAGGGGAAGGACAAAGAAGACTTCAA  
 GTTCCAAGCATCCAAGGACGGAGAGAAAAACAAGGACTTCTCAAGAAGACAGAGGAAGTGTCCAAGCC  
 AAAGGCTAAAGAAGATGCAAGACACAGT

**ACGCGT**ACGCGGGCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence: >MR230884 representing NM\_001301156  
 Red=Cloning site Green=Tags(s)

MSTTETKAVKTESKPKQSSEQPVVHEKKS KGGPKEGSEPKNLPKHTSSTGSKHAHKEKALSR SNEQMVSE  
 KPSESKTKFQDVPSAGGESVAGGGTVATALDKVVGKKKEQKPF TPASPVQSTPSKPSDKSGMDAALDDLI  
 DTLGGHEDTNRDDPPYTGPVVLDPMYSTYLEALGIKEGTIPPEYRKLLEKNEGITQPLPDSPKPMGTDQA  
 IDALSSDFTCSSPTGKQSEKEKSTGEIFKAQSAGVTRSSVPPKEKKRKRVEEEVINDQALQALSDSLGTRQ  
 PDPPSHVSQAEQVKEAKAKEERQEKCGEDEDTVPAEYRLKPAKDKDGKPLLPEPEETSKSLSESELIGEL  
 SADFDIRSTYQDKPSTPAEKSSNDTSQTTPGETVPRASMCSIRSAPPKLASLKGVPVEDAVETLAGSLGTR  
 EADPEHEKTVEDKVKEKAKEEEHEKLEKEETVPPDYRLEEVKDKDGKPLLPKESQEQ LAPLSDDFLLLDA  
 LSQDFSSPANISSLEFEDA KLSAAISEVVSQTPAPSTHAAAPLGTEQKDKELDDALDELSDSLGQRPPD  
 PDENKPLDDKVKEKIKPEHSEKLGERRDITIPPEYRHLLDNDGKDKPEKPTKKT EKPQDRPIDALSED  
 LDSCPSTTETSKNTAKGKSKTSSSKASKDGEKTKDSSKKT EEVSKPKAKEDARHS

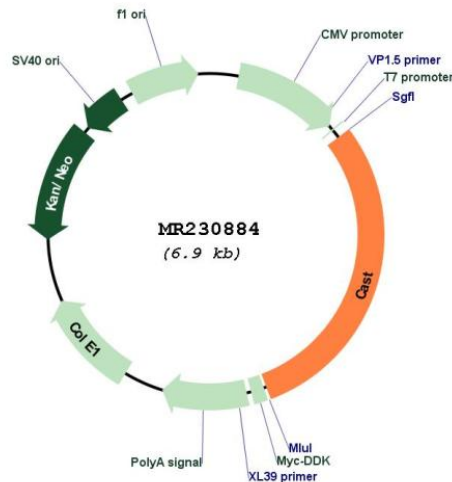
TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites:

SgfI-MluI

Cloning Scheme:



**Plasmid Map:**


**ACCN:** NM\_001301156

**ORF Size:** 2058 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\\_001301156.1](#), [NP\\_001288085.1](#)

RefSeq Size: 3839 bp

RefSeq ORF: 2061 bp

Locus ID: 12380

Cytogenetics: 13 C1

MW: 74.9 kDa

**Gene Summary:** This gene encodes an inhibitor of the calcium-dependent cysteine protease, calpain. This protein plays roles in multiple processes, including apoptosis, cell cycle regulation, and membrane fusion. Multiple protein isoforms exist which contain unique N-terminal domains, and multiple inhibitory domains that share homology with each other. Some isoforms may be tissue-specific. Two different pseudogenes of this gene are found on chromosome 19. [provided by RefSeq, Jul 2014]