

## Product datasheet for **MR230935**

### Cast (NM\_001301155) Mouse Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Cast (NM_001301155) 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:

>MR230935 representing NM\_001301155  
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCCCGCATCGCC

ATGAGTACCACAGAGACTAAGGCAATTCAGTAAACAAACAGTTGGAAGGACCTGACCAGAAAAGACCCA  
GAGAACAGGCTGTGAAAACAGAGTCTAAGAAACCAACAATCAAGTGAACAACCTGTGGTTCCAGAGAAAA  
GTCAAAAAGGAGGGCCAAAAGGAAGGGTCAGAGCCCAAAAATCTTCCGAAGCACACATCAAGTACAGGAAGC  
AAGCATGCTCATAAAGAAAAAGCACTTTCCAGATCAAATGAACAGATGGTGTGAGAGAAACCATCAGAAT  
CAAAGACAAAATTTCAAGATGTTCTTCAGCTGGTGGAGAGAGTGTGGCTGGAGGTGGGACTGTGGCCAC  
TGCCTTGGACAAAGTGGTTGGTAAGAAAAAAGAACAGAAACCATTACACCAGCTTCACCTGTGCAGTCC  
ACACCGAGCAAGCCATCTGACAAGTCAGGCATGGATGCTGCCTTGGATGACCTGATAGACACCTTAGGTG  
GACATGAAGATACTAACAGAGATGATCCACCATATACTGGACCAGTAGTTTTGGACCAATGATTCTAC  
CTACCTTGAGGCACTGGGTATAAAAAGAAGGGACTATTCTCCAGAGTATAGGAACTTTTGGAAAAAAT  
GAAGGGATCACACAACCTCTCCAGACTCTCTAACCTATGGGGACTGACCAGGCTATAGATGCCTTGT  
CATCTGATTTACCTGTAGTTCTCCAACCTGGAAGCAAAGTGAGAAGAGAAAGTCTACTGGGAAATTTT  
CAAAGCTCAGTCTGCAGGAGTGACCAGAAGTTCTGTTCCCCCAAGGAGAAGAAAAGGAAGGTGGAAGAG  
GAGGTCATAAATGATCAAGCACTTCAGGCTCTGTGAGATTCAGTGGGCACCCGGCAGCCAGATCTCCGA  
GCCACGTTAGCCAAGCTGAACAAGTCAAAGAGGCAAAAAGCAAAAAGAAAGGCAGGAGAAGTGTGGTGA  
AGATGAGGACACAGTCCCAGCTGAGTACAGGTTAAAACCAGCAAAGGATAAAGATGGAAAACCACTATTG  
CCAGAGCCTGAAGAAACATCTAAGAGCCTGAGTGAAGTGGAGCTGATTGGGGAGCTTTTCCAGATTTTG  
ACCGATCTACATATCAAGACAAACCATCTACGCCAGCTGAAAAGAAATCCAATGACACATCCCAACTCC  
TCCGGGGGAGACTGTGCCTCGGGCCTCCATGTGCAGTATACGGTCAGCGCCACCCAACTAGCATCCTTG  
AAGGGCGTGGTACCAGAAGATGCTGTTGAAACCTTGGCTGGAAGCCTGGGGACAAGGGAAGCAGATCCAG  
AACATGAAAAAAGTGTGGAGGATAAAGTCAAGGAGAAAGCTAAAGAAGAAGAGCATGAAAAAAGTGGTGA  
AAAAGAAGAAACAGTGCCTCCTGATTATCGACTAGAAGAAGTCAAGGATAAGGATGGAAAACCACTCCTG  
CCCAAAGAATCCCAGGAACAACCTGCACCCTTAAGCGATGACTTCCTTCTTGTGCTTGTCTCAGGACT  
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CACTGGATGACAAAGTGAAGGAGAAAATCAAACCAGAGCATAGCGAGAACTGGGAGAAAGAGACGACAC  
CATCCCCCTGAATACAGGCATCTCTTGATAATGATGGGAAGGACAAACCAGAGAAAGCCACCGACTAAG  
AAAACAGAGAAACCTGATCAGGACCGGGACCCATTGATGCCCTCTCAGAAGATTTGGATAGCTGCCCT  
CAACTACAGAGACCTCAAAGAATACAGCAAAGGGGAAGAGCAAGAAGACTTCAAGTTCAAAGCATCCAA  
GGACGGAGAGAAAAAAGGACTCTTCCAAGAAGACAGAGGAAGTGTCCAAGCCAAAGGCTAAAGAAGAT  
GCAAGACACAGT

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT  
ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence: >MR230935 representing NM\_001301155  
 Red=Cloning site Green=Tags(s)

MSTTETKAIPVKNQLEGPDPQKRPREQAVKTESKKPQSSEQPVVHEKSKGGPKEGSEPKNLPKHTSSTGS  
 KHAHKEKALSRNEQMVSEKPSSEKTKFQDVPSAGGESVAGGGTVATALDKVVGKKKEQKPFTPASPVQS  
 TPKSPDKSGMDAALDDLIDTLGGHEDTNRDDPPYTGPVLDPMYSTYLEALGIKEGIPPEYRKLLEKN  
 EGITQPLPDSPKPMGTDQAIDALSSDFTCSSPTGKQSEKEKSTGEIFKAQSAGVTRSSVPPKEKRRKVEE  
 EVINDQALQALSDSLGTRQPDPPSHVSQAEQVKEAKAKEERQEKGEDDTVPAEYRLKPAKDKDGKPLL  
 PEPEETSKSLSESELIGELSAFDRSTYQDKPSTPAEKKNDTSQTPPGETVPRASMCSIRSAPPKLASL  
 KGVVPEDAVETLAGSLGTREADPEHEKTVEDKVKEKAKEEEHEKLGEKEETVPPDYRLEEYKDKDGKPLL  
 PKESQEQLAPLSDDFLLDALSQDFSSPANISSLFEDAKLSAAISEVVSQTPAPSTHAAAPLPGTEKDKE  
 LDDALDELSDSLGQRPPDPDENKPLDDKVKEKIKPEHSEKLGERRDIPPEYRHLLDNDGKDKPEKPPTK  
 KTEKPDQRDPIDALSEDLDSCPSTTETSKNTAKGKSKTSSSKASKDGEKTKDSSKKEEVSKPKAKED  
 ARHS

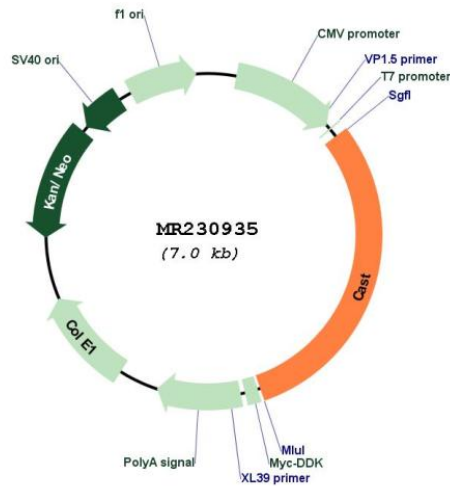
TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites:

Sgfl-MluI

Cloning Scheme:



**Plasmid Map:**


**ACCN:** NM\_001301155

**ORF Size:** 2112 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\\_001301155.1](#), [NP\\_001288084.1](#)

**RefSeq Size:** 3893 bp

RefSeq ORF: 2115 bp

Locus ID: 12380

Cytogenetics: 13 C1

MW: 76.9 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]