

## Product datasheet for **MR231146**

### Cast (NM\_001301153) Mouse Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Cast (NM_001301153) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Cast
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin



[View online »](#)

**ORF Nucleotide  
Sequence:**

>MR231146 representing NM\_001301153  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGTCCCAGCCCAGCCGAAGCCTGCCGCCTCTCCAGGCCAGTCGCGCGCGGCAGCTCGCCACACCC  
 AGGAGCATGTTAATGAAAAGAATATTGGATCATCTTCTAAACCAGGAGAAAAGAAAGGATCCGATGAGAA  
 AAAAGCAGCAAGTTTGGGGAGCAGTCAGCCTTCCAGACCACATGTTGGTGAAGCTGCCACAGCCACCAAG  
 GTGACAGCTTCTCTGCTGCCACCAGCAAGTCCCCAGCATGAGTACCACAGAGACTAAGGCAATCCAG  
 TAAACAAACAGTTGGAAGGACCTGACCAGAAAAGACCCAGAGAACAGGCTGTGAAAACAGAGTCTAAGAA  
 ACCACAATCAAGTGAGCAACCTGTGGTTCACGAGAAAAAGTCAAAGGAGGGCCAAAGGAAGGGTCAGAG  
 CCCAAAAATCTCCGAAGCACACATCAAGTACAGGAAGCAAGCATGCTCATAAAGAAAAAGCACTTTCCA  
 GATCAAATGAACAGATGGTGTGAGAGAAACCATCAGAATCAAAGCAAAAATTTCAAGATGTTCTTCAGC  
 TGGTGGAGAGAGTGTGGCTGGAGGTGGGACTGTGGCCACTGCCTTGGACAAAGTGGTTGGTAAGAAAAAA  
 GAACAGAAAACCATTCACACCAGCTTACCTGTGCAGTCCACACCGAGCAAGCCATCTGACAAGTCAGGCA  
 TGGATGCTGCCTTGGATGACCTGATAGACACCTTAGGTGGACATGAAGATACTAACAGAGATGATCCACC  
 ATATACTGGACCAGTAGTTTTGGACCCAATGTATTCTACCTACCTTGAGGCACTGGGTATAAAAAGAGGG  
 ACTATTCCTCCAGAGTATAGGAACTTTTGGAAAAAATGAAGGGATCACACAACCTCTTCCAGACTCTC  
 CTAACCTATGGGGACTGACCAGGCTATAGATGCCTTGTCTATCTGATTTACCTGTAGTTCTCCAAGTGG  
 AAAGCAAAGTGAGAAAGAGAAGTCTACTGGGAAATTTTCAAAGCTCAGTCTGCAGGAGTGACCAGAAGT  
 TCTGTTCCCCCAAGGAGAAGAAAAGGAAGGTGGAAGAGGAGGTGATAAATGATCAAGCACTTCAGGCTC  
 TGTCAGATTCACTGGGCACCCGGCAGCCAGATCCTCCGAGCCAGTTAGCCAAGTGAACAAAGTCAAAGA  
 GGCAAAAAGCAAAAAGAAGAAAGGCAGGAGAAGTGTGGTGAAGATGAGGACACAGTCCAGCTGAGTACAGG  
 TTA AAAACAGCAAAGGATAAAGATGAAAAACCACTATTGCCAGAGCCTGAAGAAACATCTAAGAGCCTGA  
 GTGAGTCGGAGCTGATTGGGGAGCTTTCAGCAGATTTTGACCGATCTACATATCAAGACAAAACCTAC  
 GCCAGCTGAAAAGAAATCCAATGACACATCCCAAACCTCCTCCGGGGGAGACTGTGCCTCGGGCCTCCATG  
 TGCAGTACGGTCAGCGCCACCCAACTAGCATCCTTGAAGGGCGTGGTACCAGAAGATGCTGTTGAAA  
 CCTTGGCTGGAAGCCTGGGGACAAGGGAAGCAGATCCAGAACATGAAAAAAGTGGAGGATAAAGTCAA  
 GGAGAAAGCTAAAGAAGAAGAGCATGAAAAACTTGGTAAAAAGAAGAAACAGTGCCTCCTGATTATCGA  
 CTAGAAGAAGTCAAGGATAAGGATGAAAAACCACTCCTGCCAAAGAATCCAGGAACAAGTGCACCCCT  
 TAAGCGATGACTTCCTTCTTGATGCCTTGTCTCAGGACTTCTCCAGTCCGGCAAACATATCGTCTCTTGA  
 ATTTGAAGATGCCAACTTTCTGCTGCCATTTCTGAAGTAGTTTCTCAGACACCTGCTCCAAGCACCCAT  
 GCAGCAGCTCCACTGCCTGGCACTGAGCAGAAAAGACAAAAGAACTTGATGATGCCTTGGATGAACTTTCTG  
 ACAGTCTTGGACAAAGGCCGCTGATCCAGATGAGAACAACCACTGGATGACAAAGTGAAGGAGAAAAAT  
 CAAACCAGAGCATAGCGAGAACTGGGAGAAAGAGACGACACCATCCCCCTGAATACAGGCATCTCTTG  
 GATAATGATGGGAAGGACAAAACCAGAGAAGCCACCGACTAAGAAAACAGAGAAACCTGATCAGGACCGGG  
 ACCCCATTGATGCCCTCTCAGAAGATTTGGATAGCTGCCCTCACTACAGAGACCTCAAAGAATACAGC  
 AAAGGGGAAGAGCAAGAAGACTTCAAGTTCAAAGCATCCAAGGACGGAGAGAAAAACAAAGGACTCTTCC  
 AAGAAGACAGAGGAAGTGTCCAAGCCAAAGGCTAAAGAAGATGCAAGACACAGT

**ACGCGT**ACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:** >MR231146 representing NM\_001301153  
 Red=Cloning site Green=Tags(s)

```
MSQPGPKPAASPRPSRGAARHTQEHVNEKNIGSSSKPGEKKGSDKKAASLGSSQPSRPHVGEAATATK
VTASSAATSKSPSMSTTETKAIPVNKQLEGPDKRPREQAVKTESKPKQSSQVVEHKKSKGGPKEGSE
PKNLPKHTSSTGSKHAHKEKALSRNEQVMSEKPSKTKFQDVP SAGGESVAGGGTVATALDKVVGKKK
EQKPFPTASPVQSTPSKPSDKSGMDAALDDLIDTLGGHEDTNRDDPPYTGPVVLDPMYSTYLEALGIKEG
TIPPEYRKLLEKNEGITQPLPDSPKPMGTDQAIDALSSDFTCSSPTGKQSEKSTGEIFKAQSAGVTRS
SVPPKEKRRKVEEEVINDQALQALSDSLGTRQDPDPPSHVSQAEQVKEAKAKEERQEKCGEDEDTPAEYR
LKPAKDKDGKPLLPEPEETSLSLSESELIGELSADFDRSTYQDKPSTPAEKKSNDTSQTPPETVPRASM
CSIRSAPPKLASLKGVPEDAVETLAGSLGTREADPEHEKTVEDKVKEKAKEEEHEKLGEKEETVPPDYR
LEEVKDKDGKPLLPKESQEQQLAPLSDFFLLDALSQDFSSPANISSLEFEDA KLSAAISEVVSQTPAPSTH
AAAPLPGTEQDKELDDALDELSDSLGQRPPDPDENKPLDDKVKEKIKPEHSEKLGERDDTIPPEYRHL
DNDGKDKPEKPPTKKTEKPDQDRPIDALSEDLDSCPSTTETSKNTAKGKSKTSSSKASKDGEKTKDSS
KKTEEVSKPKAKEDARHS
```

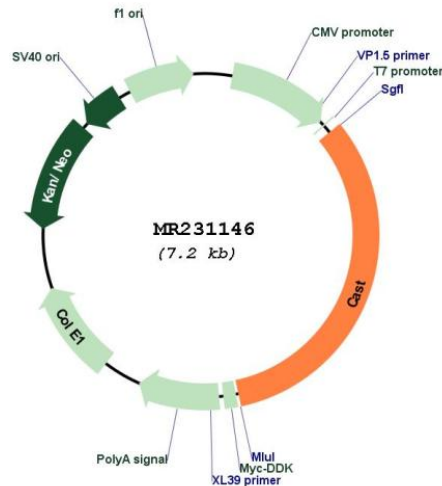
TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Restriction Sites:**

SgfI-MluI

**Cloning Scheme:**



**Plasmid Map:**


**ACCN:** NM\_001301153

**ORF Size:** 2364 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\\_001301153.1](#), [NP\\_001288082.1](#)

**RefSeq Size:** 4165 bp

**RefSeq ORF:** 2367 bp

**Locus ID:** 12380

**UniProt ID:** [P51125](#)

**Cytogenetics:** 13 C1

**MW:** 85.4 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]