

## Product datasheet for **RC211776**

### Calpastatin (CAST) (NM\_001750) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Calpastatin (CAST) (NM_001750) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Calpastatin
Synonyms:	BS-17; PLACK
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



[View online »](#)

**ORF Nucleotide  
Sequence:**

>RC211776 representing NM\_001750  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGTCCCAGCCCGCCAGAAAGCCCGCCGCTCCCCGCGGCCCGCGGAGCAGCCCGCCCGCCGACCC  
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 AAAAGCAGCAAGCCTCGGCAGCAGTCAATCCTCCAGAACCTATGCTGGTGAACAGCCTCGGCCACCAAG  
 GTGTCAGTTCCTCTGGTGAACAGCAAGTCTTCCAGTATGAATCCACAGAAACCAAGGCCATTCAG  
 TCAGCCAAACAGATGGAAGGACCACATCTTCTAACAAGAAAAACAAAAAACAGGCTGTAAAAACAGA  
 ACCTGAGAAGAAGTACAGTCAACCAAGCTGTCTGTGGTTCATGAGAAAAATCCCAAGAAGGAAAGCCA  
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 GAGTACAGATTAACACCGCCACGATAAAGATGGAAAACCACTATTGCCAGAGCCTGAAGAAAAACCCA  
 AGCCTCGGAGTGAATCAGAACTCATTGATGAACCTTTCAGAAGTTTTGACCGGTCTGAATGTAAAGAGAA  
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 AATGGAGGTAAGCGAAGGATTACAGCAAGACAACAGAGGAACTTCCAAGCCAAAAGATGAC

**ACGCGT**ACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:** >RC211776 representing NM\_001750  
Red=Cloning site Green=Tags(s)

MSQPGQKPAASPRPRAAAAARRTHEHVSEKTSSEPSKPGKKGSDKKAASLGSSQSSRTYAGGTASATK  
VSASSGATSKSSSMNPTETKAIPVSQQMEGPHLPNKKKHKQAVKTEPEKKSQSTKLSVVHEKKSQEGK  
KEHTEPKSLPKQASDTGSNDAHNNKAVSRSAEQQPSEKSTEPKTKPQDMI SAGGESVAGITAIISGKPGDK  
KKEKKS LTPAVPVESKPDKPSGKSGMDAALDDLIDTLGGPEETEEENTTYTGPEVSDPMSSTYIEELGKR  
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ASTTQAGAPPRDTSQSDKDLDDALDKLSDSLGQRQPD DENKPMEDKVKEKAKAEHRDKLGERDDTIPPE  
YRHLLDDNGQDKPVKPPTKKSEDSKKPADDQDPIDALSGDL DSCPSTTETSQNTAKDKCKKAASSSKAPK  
NGGKAKDSAKTTEETSKPKDD

TRTRPLEQKLI SEEDLAANDILDYKDDDDKV

**Chromatograms:** [https://cdn.origene.com/chromatograms/mk6164\\_b04.zip](https://cdn.origene.com/chromatograms/mk6164_b04.zip)

**Restriction Sites:** Sgfl-Mlul

Cloning Scheme:



ACCN: NM\_001750

ORF Size: 2373 bp

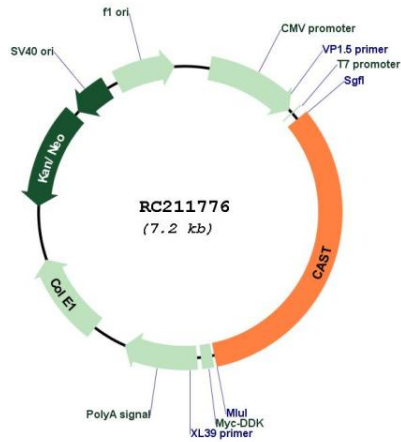
OTI Disclaimer: The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially 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.

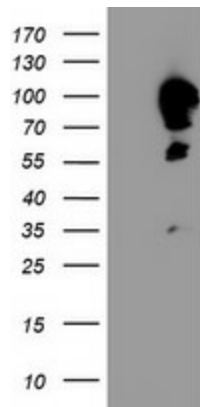
Components: The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

<b>Reconstitution Method:</b>	<ol style="list-style-type: none"><li>1. Centrifuge at 5,000xg for 5min.</li><li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li><li>3. Close the tube and incubate for 10 minutes at room temperature.</li><li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li><li>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.</li></ol>
<b>Note:</b>	Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.
<b>RefSeq:</b>	<a href="#">NM_001750.7</a>
<b>RefSeq Size:</b>	4629 bp
<b>RefSeq ORF:</b>	2376 bp
<b>Locus ID:</b>	831
<b>UniProt ID:</b>	<a href="#">P20810</a>
<b>Cytogenetics:</b>	5q15
<b>Domains:</b>	Calpain_inhib
<b>MW:</b>	84.8 kDa
<b>Gene Summary:</b>	<p>The protein encoded by this gene is an endogenous calpain (calcium-dependent cysteine protease) inhibitor. It consists of an N-terminal domain L and four repetitive calpain-inhibition domains (domains 1-4), and it is involved in the proteolysis of amyloid precursor protein. The calpain/calpastatin system is involved in numerous membrane fusion events, such as neural vesicle exocytosis and platelet and red-cell aggregation. The encoded protein is also thought to affect the expression levels of genes encoding structural or regulatory proteins. Alternatively spliced transcript variants encoding different isoforms have been described. [provided by RefSeq, Jun 2010]</p>

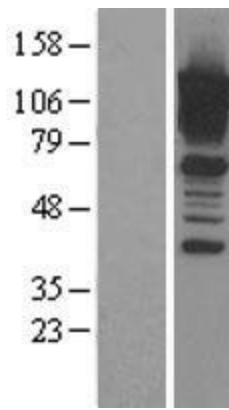
Product images:



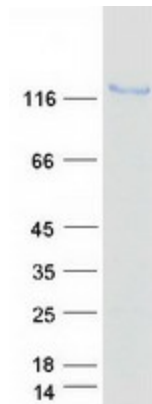
Circular map for RC211776



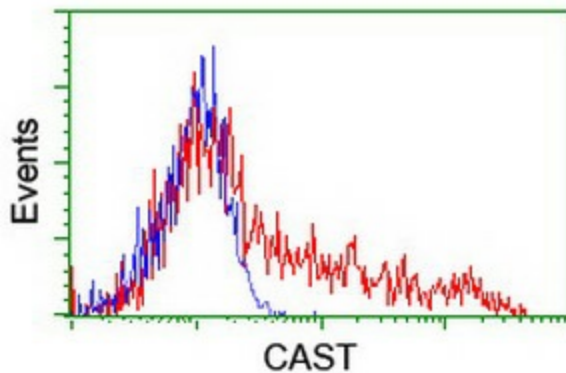
HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY CAST (Cat# RC211776, Right lane) cDNA for 48 hrs and lysed. Equivalent amounts of cell lysates (5 ug per lane) were separated by SDS-PAGE and immunoblotted with anti-CAST (Cat# [TA504351]). Positive lysates [LY400663] (100ug) and [LC400663] (20ug) can be purchased separately from OriGene.



Western blot validation of overexpression lysate (Cat# [LY400663]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC211776 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified CAST protein (Cat# [TP311776]). The protein was produced from HEK293T cells transfected with CAST cDNA clone (Cat# RC211776) using MegaTran 2.0 (Cat# [TT210002]).



HEK293T cells transfected with either RC211776 overexpress plasmid (Red) or empty vector control plasmid (Blue) were immunostained by anti-CAST antibody ([TA504351]), and then analyzed by flow cytometry.