

Product datasheet for **RC222278**

Calpastatin (CAST) (NM_173061) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Calpastatin (CAST) (NM_173061) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Calpastatin
Synonyms:	BS-17; calpain inhibitor; calpastatin; heart-type calpastatin; MGC9402; OTTHUMP00000158519; OTTHUMP00000158520; sperm BS-17 component
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide Sequence:

>RC222278 representing NM_173061
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGCATCGCC**

ATGGGCCAGTTTCTATCTTCGACTTTCTTGGAGGGCTCACGGCCACAGTGTGGCAGATAAGCTTTGTG
 ACGGTGAACGCAGAGGAGCAAGAGAAGCAGTTCGTATCTTCCAGGACCAAGCAAAAGCTAAAGAAGAAAA
 ACTAGAGAAGTGTGGTGAGGATGATGAAACAATCCCATCTGAGTACAGATTAAAACCAGCCACGGATAAA
 GATGGAAAACCACTATTGCCAGAGCCTGAAGAAAAACCAAGCCTCGGAGTGAATCAGAAGTCAATGATG
 AACTTTGAGAAGATTTTGACCGTCTGAATGTAAGAGAAACCATCTAAGCCAAGTAAAAGACAGAAGA
 ATCTAAGGCCGCTGCTCCAGCTCCTGTGTCGGAGGCTGTGTGTCGGACCTCCATGTGTAGTATACAGTCA
 GCACCCCTGAGCCGGCTACCTGAAGGGCACAGTCCAGATGATGCTGTAGAAGCCTTGGCTGATAGCC
 TGGGGAAAAAGGAAGCAGATCCAGAAGATGAAAACTGTGATGGATAAAGTCAAGGAGAAGGCCAAAGA
 AGAAGACCGTAAAAGCTTGGTAAAAAGAAGAAACAATTCCTCCTGATTATAGATTAGAAGAGGTCAAG
 GATAAAGATGAAAGCCACTCCTGCCAAAAGAGTCTAAGGAACAGCTTCCACCCATGAGTGAAGACTTCC
 TTCTGGATGCTTTGTCTGAGGACTTCTCTGGTCCAAAAATGCTTCATCTCTTAAATTTGAAGATGCTAA
 ACTTGCTGCTGCCATCTCTGAAGTGGTTTCCAAACCCAGCTTCAACGACCCAGCTGGAGCCCCACCC
 CGTGATACCTCGAGTGACAAAGACCTCGATGATGCCTTGGATAAACTCTCTGACAGTCTAGGACAAAGGC
 AGCCTGACCCAGATGAGAACAACCAATGGAAGATAAAGTAAAGGAAAAAGCTAAAGCTGAACATAGAGA
 CAAGCTTGAGAAAGAGATGACACTATCCACCTGAATACAGACATCTCCTGGATGATAATGGACAGGAC
 AAACAGTGAAGCCACCTACAAAGAAATCAGAGGATTCAAAGAAACCTGCAGATGACCAAGACCCCATG
 ATGCTCTCTCAGGAGATCTGGACAGCTGTCCCTCCACTACAGAAACCTCACAGAACACAGCAAAGGATAA
 GTGCAAGAAGGCTGCTTCCAGCTCCAAAGCAGCTAAGAATGGAGGTAAGCGAAGGATTACAGCAAAGACA
 ACAGAGGAAACTTCCAAGCCAAAAGATGAC

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RC222278 representing NM_173061
 Red=Cloning site Green=Tags(s)

MGQFLSSTFLEGGPATVWHDKLCGERRGAREAVRIFQDQAKAKEEKLEKCGEDDETIPSEYRLKPADTK
 DGKPLLPEPEEKPKRSESELIDELSEDFRSECKEKPSKTEKTEESKAAAPAPVSEAVCRTSMCSIQS
 APPEPATLKGTVPDDAVEALADSLGKKEADPEDGKPVMDKVKEKAKEEDREKLGEKEETIPPDYRLEEK
 DKDGKPLLPKESKEQLPPMSEDFLLDALSEDFSGPQNASSLKFEDAKLAAAISEVVSQTPASTTQAGAPP
 RDTSSDKLDDALDKLSDSLGQRQPDENKPMEDKVKEKAKAEHRDKLGERDDTIPPEYRHLLDDNGQD
 KPVKPTKKSSESKKPADDQDPIDALSGDLDCPSTTETSQNTAKDKCKKAASSSKAPKNGGKAKDSAKT
 TEETSKPKDD

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms:

https://cdn.origene.com/chromatograms/mk8059_d02.zip

Restriction Sites:

Sgfl-Mlul

Cloning Scheme:


ACCN: NM_173061

ORF Size: 1290 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_173061.2](#), [NP_775084.1](#)

RefSeq Size: 1889 bp

RefSeq ORF: 1292 bp

Locus ID: 831

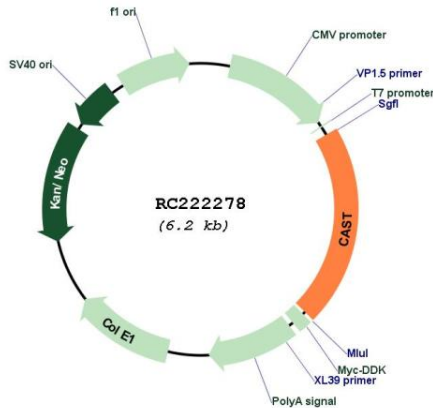
Cytogenetics: 5q15

MW: 46.9 kDa

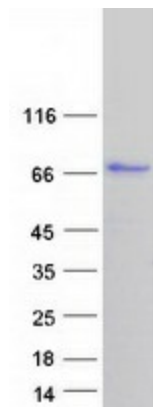
Gene Summary:

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]

Product images:



Circular map for RC222278



Coomassie blue staining of purified CAST protein (Cat# [TP322278]). The protein was produced from HEK293T cells transfected with CAST cDNA clone (Cat# RC222278) using MegaTran 2.0 (Cat# [TT210002]).