

Product datasheet for **RC202168**

Calpastatin (CAST) (NM_001042444) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Calpastatin (CAST) (NM_001042444) 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:

>RC202168 ORF sequence
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCCGCATCGCC

ATGAATCCCACAGAAACCAAGGCTGTA AAAACAGAACCTGAGAAGAAGTCACAGTCAACCAAGCCAAAA
GCCTACCCAAGCAGGCATCAGATACAGGAAGTAACGATGCTCACAATAAAAAAGCAGTTTCCAGATCAGC
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GTTTCAGATCCAATGAGTTCACCTACATAGAGGAATTGGGTAAAAGAGAAGTCAACAATTCCTCCAAAAT
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AGACCCATTGATGCTCTCTCAGGAGATCTGGACAGCTGTCCCTCCACTACAGAAACCTCACAGAACACA
GCAAAGGATAAGTGAAGAAGGCTGCTTCCAGCTCCAAGCACCTAAGAATGGAGGTAAGCGAAGGATT
CAGCAAAGACAACAGAGGAACTTCCAAGCCAAAAGATGAC

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence: >RC202168 protein sequence
Red=Cloning site Green=Tags(s)

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MNPTETKAVKTEPEKKSQSTKPKSLPKQASDTGSNDAHNNKAVSRSAEQQPSEKSTEPKTKPQDMISAGG
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EEKLEKCGEDDETIPSEYRLKPATDKDGKPLLPEPEEKPKRSESELIDELSEDFRSECKEKPSKPTTEK
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AKDKCKKAASSSKAPKNGGKAKDSAKTTEETSKPKDD
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TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk6711_f05.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_001042444

ORF Size: 2001 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_001042444.2](#)

RefSeq Size: 4366 bp

RefSeq ORF: 2004 bp

Locus ID: 831

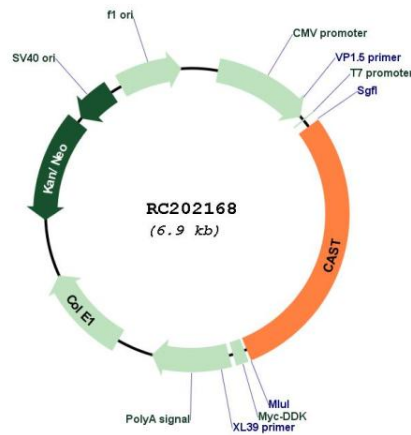
UniProt ID: [P20810](#)

Cytogenetics: 5q15

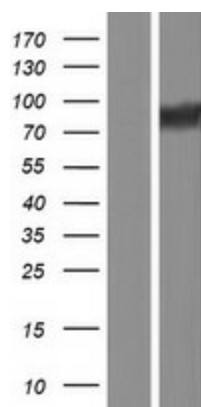
MW: 71.9 kDa

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]

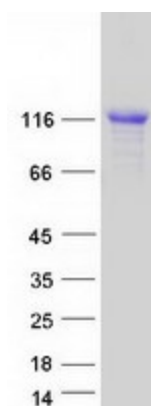
Product images:



Circular map for RC202168



Western blot validation of overexpression lysate (Cat# [LY420908]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC202168 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified CAST protein (Cat# [TP302168]). The protein was produced from HEK293T cells transfected with CAST cDNA clone (Cat# RC202168) using MegaTran 2.0 (Cat# [TT210002]).