

Product datasheet for **RG211937**

Calpastatin (CAST) (NM_001042440) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Calpastatin (CAST) (NM_001042440) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	CAST
Synonyms:	BS-17; PLACK
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



[View online »](#)

ORF Nucleotide Sequence:

>RG211937 representing NM_001042440
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGCATCGCC**

ATGTCCCAGCCCGCCAGAAGCCCGCCGCTCCCCCGGGCCCGCGAGCAGCCCGCCCGCCGACCC
 ATGAGCATGTGAGTGAAGAAACCAAGTGAATCGCCTTCCAACCCAGGAGAAAAGAAAGGATCAGATGAGAA
 AAAAGCAGCAAGCCTCGGCAGCAGTCAATCCTCCAGAACCTATGCTGGTGAACAGCCTCGGCCACCAAG
 GTGTCAGTTCCTCTGGTGAACCAAGTCTTCCAGTATGAATCCACAGAAACCAAGGCTGTAAAAA
 CAGAACCTGAGAAGAAGTACAGTCAACCAAGCCAAAAAGCCTACCCAAGCAGGCATCAGATACAGGAAG
 TAACGATGCTCACAATAAAAAAGCAGTTTCCAGATCAGCTGAACAGCAGCCATCAGAGAAATCAACAGAA
 CCAAAGACTAAACCACAAGACATGATTTCTGCTGGTGGAGAGAGTGTGCTGGTATCACTGCAATATCTG
 GCAAGCCGGGTGACAAGAAAAAGAAAAGAAATCATTAAACCCAGCTGTGCCAGTTGAATCTAAACCCGGA
 TAAACCATCGGGAAAGTCAGGCATGGATGCTGCTTTGGATGACTTAATAGATACTTTAGGAGGACCTGAA
 GAAACTGAAGAAGAAAATACAACGTATACTGGACCAGAAGTTTCAGATCCAATGAGTTCACCTACATAG
 AGGAATTGGGTAAAAGAGAAGTCAAAATCCTCCAAAATATAGGGAACTATTGGCTAAAAAGGAAGGGAT
 CACAGGGCCTCCTGCAGACTCTTCGAAACCCATAGGGCCAGATGATGCTATAGACGCCTTGTCTATCTGAC
 TTCACCTGTGGTGCCTACAGCTGCTGGAAAGAAAAGTGAAGAAAGGAATCTACAGAAGTTTTAAAAAG
 CTCAGTCAGCAGGGACAGTCAGAAGTGTGCTCCACCCCAAGAGAAGAAAAGAAAGGTGGAGAAGGATAC
 AATGAGTGATCAAGCACTCGAGGCTCTGTCGGCTTCACTGGGCACCCGCAAGCAGAACCTGAGCTCGAC
 CTCCGCTCAATTAAGGAAGTCTGATGAGGCAAAAGCTAAAGAAGAAAAGTGAAGAAAGTGTGGTGAAGATG
 ATGAAACAATCCCATCTGAGTACAGATTAACCAAGCCAGCCAGGATAAAGATGGAAAACCACTATTGCCAGA
 GCCTGAAGAAAAACCCCAAGCCTCGGAGTGAATCAGAACCTATTGATGAACTTTCAGAAGATTTTGACCGG
 TCTGAATGTAAAGAGAACCATCTAAGCCAACCTGAAAAGACAGAAGAATCTAAGGCCGCTGCTCCAGCTC
 CTGTGTCGGAGGCTGTGTGTCGGACCTCCATGTGTAGTATACAGTCAGCACCCCTGAGCCGGCTACCTT
 GAAGGGCACAGTGCCAGATGATGCTGTAGAAGCCTTGGCTGATAGCCTGGGGAAAAGGAAGCAGATCCA
 GAAGATGGAAAACCTGTGATGGATAAAGTCAAGGAGAAGGCCAAAGAAGAAGACCGTGAAGAACTTGGTG
 AAAAAGAAGAAACAATTCCTCCTGATTATAGATTAGAAGAGGTCAAGGATAAAGATGGAAAGCCACTCCT
 GCCAAAAGAGTCTAAGGAACAGCTTCCACCCATGAGTGAAGACTTCCTTCTGGATGCTTTGTCTGAGGAC
 TTCTCTGGTCCACAAAATGCTTCTCTTAAATTTGAAGATGCTAAACTTGCTGCTGCCATCTCTGAAG
 TGGTTTCCAAACCCAGCTTCAACGACCCAAGCTGGAGCCCCACCCCGTGATACCTCGCAGAGTGACAA
 AGACCTCGATGATGCCTTGGATAAACTCTGACAGTCTAGGACAAGGCAGCCTGACCCAGATGAGAAC
 AAACCAATGGAAGATAAAGTAAAGGAAAAGCTAAAGCTGAACATAGAGACAAGCTTGGAGAAAAGAGATG
 ACACTATCCACCTGAATACAGACATCTCCTGGATGATAATGGACAGGACAAACCAAGTGAAGCCACTAC
 AAAGAAATCAGAGGATTCAAAGAAACCTGCAGATGACCAAGACCCATTGATGCTCTCAGGAGATCTG
 GACAGCTGTCCCTCCACTACAGAAACCTCACAGAACACAGCAAAGGATAAGTGCAAGAAGGCTGCTTCCA
 GCTCCAAAGCACCTAAGAATGGAGGTAAGCGAAGGATTACAGCAAAGACAACAGAGGAACTTCCAAGCC
 AAAAGATGAC

ACGCGTACGCGGCCGCTCGAG – GFP Tag – GTTTAA

Protein Sequence: >RG211937 representing NM_001042440
 Red=Cloning site Green=Tags(s)

MSQPGQKPAASPRPRRAAAAARRTHEHVSEKTESPSKPGEEKGSDEKKAASLGSSQSSRTYAGGTASATK
 VSASSGATSKSSSMNPTEKAVKTEPEKKSQSTKPKSLPKQASDTGSNDAHNKKAVSRSAEQPSEKSTE
 PKTKPQDMISAGGESVAGITAIISGKPGDKKKEKSLTPAVPVESKPKPKSGKSGMDAALDDLIDTLGGPE
 ETEEENTTYTGPEVSDPMSSTYIEELGKREVTIPPKYRELLAKKEGITGPPADSSKPIGPDDAIDALSSD
 FTCGSPTAAGKKEEESTEVLKAQSAGTVRSAAPPQEKKRKVEKDTMSDQALEALSASLGTRQAEPELD
 LRSIKEVDEAKAKEEKLEKCGEDDETIPSEYRLKPATDKDGKPLLPEPEEKPKPRSESELIDELSEDFDR
 SECKEKPSKPTKTEESKAAAPAVSEAVCRTSMCSIQSAPPEPATLKGTVPDDAVEALADSLGKKEADP
 EDGKPVMDKVKEKAKEEDREKLGEKEETIPPDYRLEEVKDKDGKPLLPKESKEQLPMPSEDFLLDALSED
 FSGPQNASSLKFEDAKLAAAISEVVSQTPASTTQAGAPPRDTSQSDKDLDDALDKLSDSLGQRQDPDPDEN
 KPMEDKVKEKAKAEHRDKLGERDDTIPPEYRHLDDNGQDKPVKPPPTKKSSEDSSKPPADDQDPIDALSGDL
 DSCPSTTETSQNTAKDKCKKAASSKAPKNGGKAKDSAKTTEETSKPKDD

TRTRPLE - GFP Tag - V

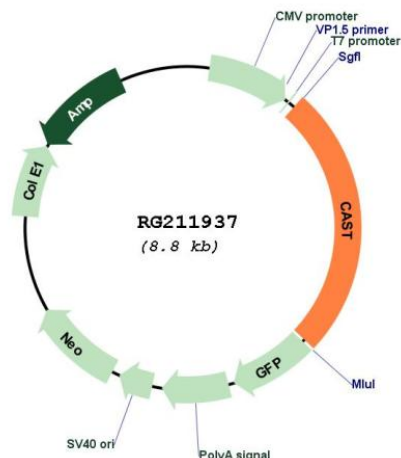
Restriction Sites: SgfI-MluI

Cloning Scheme:

Cloning sites used for ORF Shutting:



Plasmid Map:



ACCN: NM_001042440

ORF Size: 2250 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_001042440.5](#)

RefSeq Size: 4550 bp

RefSeq ORF: 2253 bp

Locus ID: 831

UniProt ID: [P20810](#)

Cytogenetics: 5q15

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]