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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)

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ORF Nucleotide Sequence:

>RC211776 representing NM_001750
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGTCCCAGCCCGGCCAGAAGCCCGCCGCCTCCCCGCGGCCCCGGCGAGCAGCCGCCGCCCGCCGCACCC
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ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

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Protein Sequence:

>RC211776 representing NM_001750
Red=Cloning site Green=Tags(s)

MSQPGQKPAASPRPRRAAAARRTHEHVSEKTSESPSKPGEKKGSDEKKAASLGSSQSSRTYAGGTASATK
VSASSGATSKSSSMNPTETKAIPVSQQMEGPHLPNKKKHKKQAVKTEPEKKSQSTKLSVVHEKKSQEGKP
KEHTEPKSLPKQASDTGSNDAHNKKAVSRSAEQQPSEKSTEPKTKPQDMISAGGESVAGITAISGKPGDK
KKEKKSLTPAVPVESKPDKPSGKSGMDAALDDLIDTLGGPEETEEENTTYTGPEVSDPMSSTYIEELGKR
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CRTSMCSIQSAPPEPATLKGTVPDDAVEALADSLGKKEADPEDGKPVMDKVKEKAKEEDREKLGEKEETI
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ASTTQAGAPPRDTSQSDKDLDDALDKLSDSLGQRQPDPDENKPMEDKVKEKAKAEHRDKLGERDDTIPPE
YRHLLDDNGQDKPVKPPTKKSEDSKKPADDQDPIDALSGDLDSCPSTTETSQNTAKDKCKKAASSSKAPK
NGGKAKDSAKTTEETSKPKDD

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk6164_b04.zip

Restriction Sites: SgfI-MluI

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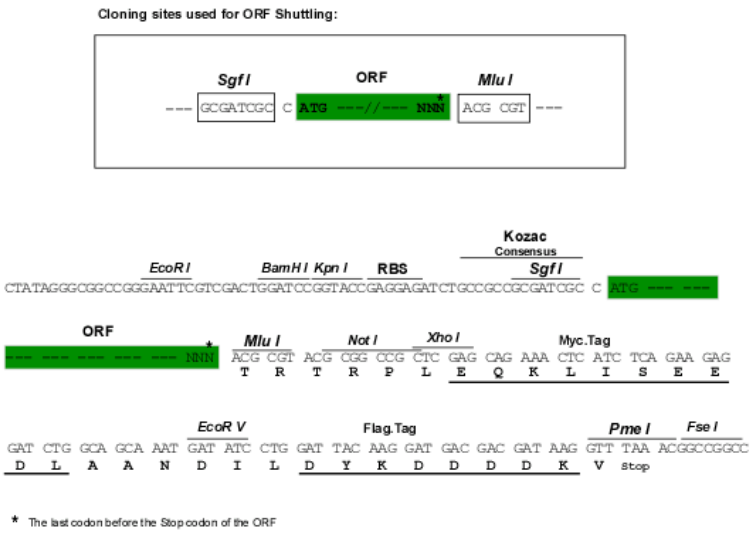
Cloning Scheme:



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).

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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_001750.7

RefSeq Size: 4629 bp

RefSeq ORF: 2376 bp

Locus ID: 831

UniProt ID: P20810

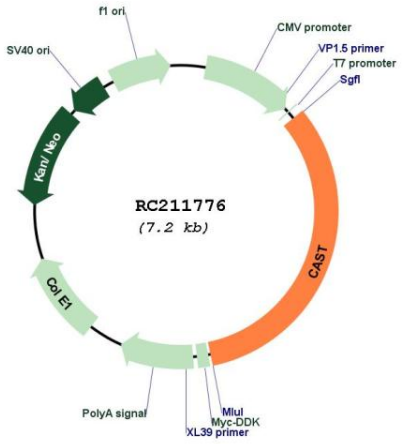
Cytogenetics: 5q15

Domains: Calpain_inhib

MW: 84.8 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 RC211776

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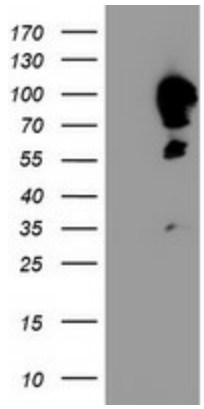
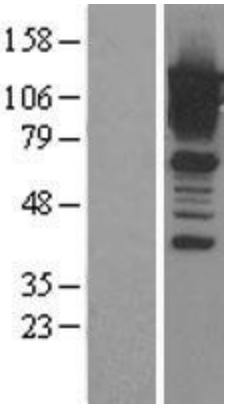
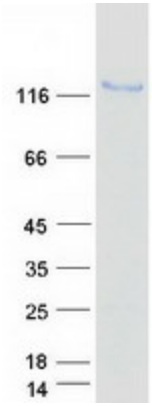


HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY CAST (Cat# RC211776, Right lane) cDNA for 48 hrs and lysed. Equivalent amounts of cell lysates (5 ug per lane) were separated by SDS-PAGE and immunoblotted with anti-CAST (Cat# [TA504351]). Positive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

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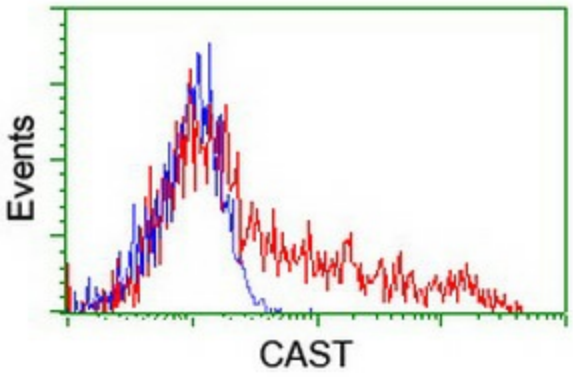

HEK293T cells transfected with either RC211776 overexpress plasmid (Red) or empty vector control plasmid (Blue) were immunostained by anti-CAST antibody ([TA504351]), and then analyzed by flow cytometry.

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