

## Product datasheet for **RC205642**

### Calpain 2 (CAPN2) (NM\_001748) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Calpain 2 (CAPN2) (NM_001748) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Calpain 2
Synonyms:	CANP2; CANPL2; CANPml; mCANP
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



[View online »](#)

**ORF Nucleotide  
Sequence:**

>RC205642 ORF sequence  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGGCGGGCATCGCGCCAAGCTGGCGAAGGACCGGGAGGCGGCCGAGGGGCTGGCTCCCACGAGAGGG  
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 GGACCCGTCCTTCCCGGCCATCCCTCGGCCCTGGGCTTCAAGGAGTTGGGGCCCTACTCCAGCAAACCC  
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 GCAGCTGGATCCCGAGAATACTGGAACAATAGAGCTCGACCTTATCTCTTGGCTCTGTTTCTCAGTACTT

AG**CGGACCG**ACGCGTACGCGCCGCTCGAGCAGAAAATCATCTCAGAAGAGGATCTGGCAGCAAATGATATCC  
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**Protein Sequence:** >RC205642 protein sequence  
Red=Cloning site Green=Tags(s)

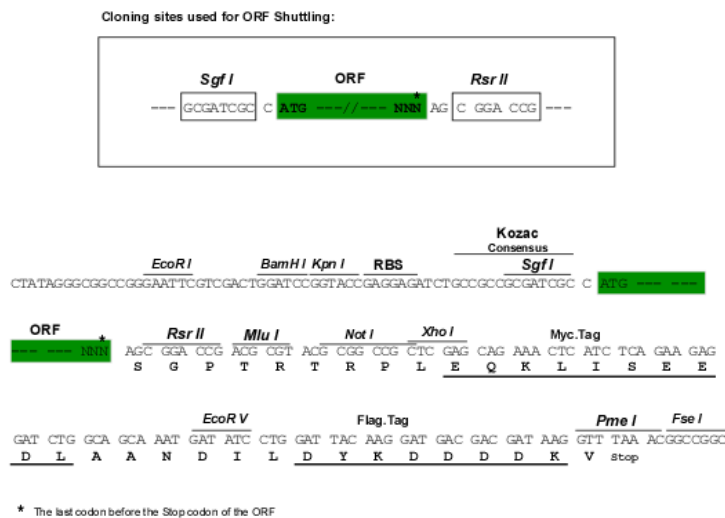
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 FQFWQYGEWVEVVDDRLPTKDGELLFVHSAEGSEFWSALLEKAYAKINGCYEALSGGATTEGFEDFTGG  
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 PNKDGDFCIRVSEKKADYQAVDDEIEANLEEFDISEDDIDDGFRRLFAQLAGEDAEISAFELQTLRRV  
 LAKRQDIKSDGFSIETCKIMVDMLDSDGSGKLGKLFYILWTKIQYQKIYREIDVDRSGTMNSYEMRKA  
 LEEAGFKMPCQLHQVIVARFADDQLIIDFNFRVRLVRLVLETLFKIFKQLDPENTGTIELDLISWLCFSVL

SGPTRTRPLEQKLI SEEDLAANDILDYKDDDDKV

**Chromatograms:** [https://cdn.origene.com/chromatograms/mk6184\\_c12.zip](https://cdn.origene.com/chromatograms/mk6184_c12.zip)

**Restriction Sites:** SgfI-RsrII

**Cloning Scheme:**



**ACCN:** NM\_001748

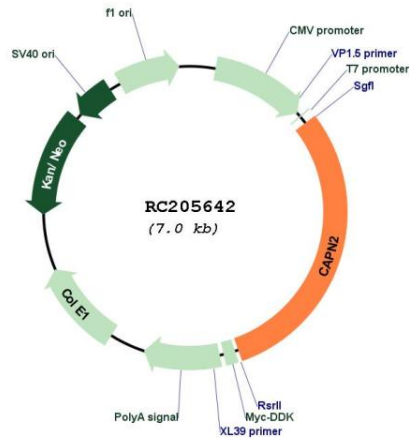
**ORF Size:** 2100 bp

**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](#)

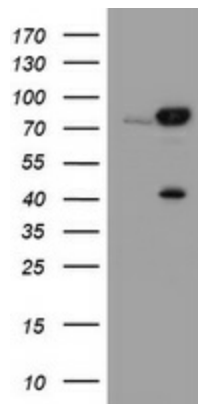
**OTI Annotation:** This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

<b>Components:</b>	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>RefSeq:</b>	<a href="#">NM_001748.5</a>
<b>RefSeq Size:</b>	3492 bp
<b>RefSeq ORF:</b>	2103 bp
<b>Locus ID:</b>	824
<b>UniProt ID:</b>	<a href="#">P17655</a>
<b>Cytogenetics:</b>	1q41
<b>Domains:</b>	Calpain_III, EFh
<b>Protein Families:</b>	Druggable Genome, Protease
<b>Protein Pathways:</b>	Alzheimer's disease, Apoptosis, Focal adhesion
<b>MW:</b>	80 kDa
<b>Gene Summary:</b>	The calpains, calcium-activated neutral proteases, are nonlysosomal, intracellular cysteine proteases. The mammalian calpains include ubiquitous, stomach-specific, and muscle-specific proteins. The ubiquitous enzymes consist of heterodimers with distinct large, catalytic subunits associated with a common small, regulatory subunit. This gene encodes the large subunit of the ubiquitous enzyme, calpain 2. Multiple heterogeneous transcriptional start sites in the 5' UTR have been reported. Two transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Mar 2009]

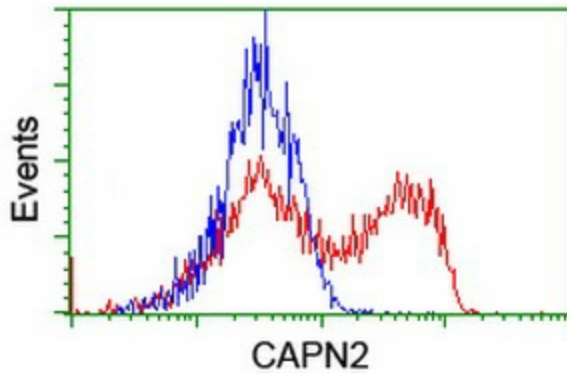
Product images:



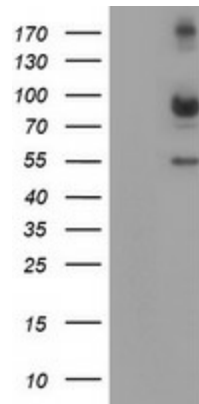
Circular map for RC205642



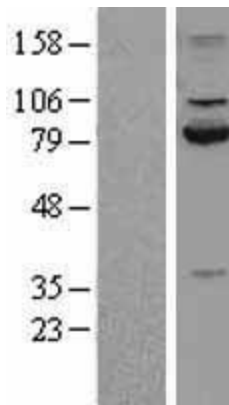
HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY CAPN2 (Cat# RC205642, Right lane) cDNA for 48 hrs and lysed. Equivalent amounts of cell lysates (5 ug per lane) were separated by SDS-PAGE and immunoblotted with anti-CAPN2 (Cat# [TA504280]). Positive lysates [LY400662] (100ug) and [LC400662] (20ug) can be purchased separately from OriGene.



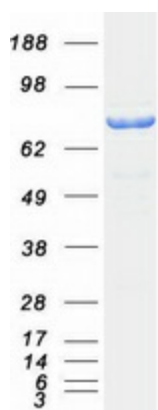
HEK293T cells transfected with either RC205642 overexpress plasmid (Red) or empty vector control plasmid (Blue) were immunostained by anti-CAPN2 antibody ([TA504345]), and then analyzed by flow cytometry.



HEK293T cells were transfected with the pCMV6-ENTRY control (Left lane) or pCMV6-ENTRY CAPN2 (RC205642, 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-CAPN2 ([TA504345]). Positive lysates [LY400662] (100ug) and [LC400662] (20ug) can be purchased separately from OriGene.



Western blot validation of overexpression lysate (Cat# [LY400662]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC205642 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified CAPN2 protein (Cat# [TP305642]). The protein was produced from HEK293T cells transfected with CAPN2 cDNA clone (Cat# RC205642) using MegaTran 2.0 (Cat# [TT210002]).