

## Product datasheet for **SC125531**

### **CAPNS1 (NM\_001749) Human Untagged Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	CAPNS1 (NM_001749) Human Untagged Clone
Tag:	Tag Free
Symbol:	CAPNS1
Synonyms:	CALPAIN4; CANP; CANPS; CAPN4; CDPS; CSS1
Mammalian Cell Selection:	None
Vector:	<u><a href="#">pCMV6-XL5</a></u>
E. coli Selection:	Ampicillin (100 ug/mL)
Fully Sequenced ORF:	>NCBI ORF sequence for NM_001749, the custom clone sequence may differ by one or more nucleotides

```
ATGTTCTCGTTAACTCGTTCTTGAAGGGCGGCGGCGGCGGCGGGGAGGCGGGGGCCTGGGTGGGG
GCCTGGGAAATGTGCTTGGAGGCCTGATCAGCGGGGCCGGGGCGGCGGCGGCGGCGGCGGCGGCGG
CGGTGGTGGAGGCGGCGGTGGCGGTGGAACGGCCATGCGCATCCTAGGCGGAGTCATCAGCGCCATCAGC
GAGGCGGCTGCGCAGTACAACCCGGAGCCCCGCCCCACGCACACATTACTCCAACATTGAGGCCAACG
AGAGTGAGGAGGTCCGGCAGTCCGGAGACTCTTTGCCAGCTGGCTGGAGATGACATGGAGGTGAGCGC
CACAGAACTCATGAACATTCTCAATAAGTTGTGACACGACCCCTGATCTGAAGACTGATGTTTTGGC
ATTGACACATGTGCGCAGCATGGTGGCCGTGATGGATAGCGACACCACAGGCAAGCTGGGCTTTGAGGAAT
TCAAGTACTTGTGGAACAACATCAAAGGTGGCAGGCCATATACAAACAGTTCGACACTGACCGATCAGG
GACCATTTGCAGTAGTGAACCTCCAGGTGCCTTTGAGGCAGCAGGGTTCCACCTGAATGAGCATCTCTAT
AACATGATCATCCGACGCTACTCAGATGAAAGTGGGAACATGGATTTTGACAACTTCATCAGCTGCTTGG
TCAGGCTGGACGCCATGTTCCGTGCCTTCAAATCTCTTGACAAAGATGGCACTGGACAAATCCAGGTGAA
CATCCAGGAGTGGCTGCAGCTGACTATGTATTCTGA
```



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**5' Read Nucleotide Sequence:**

>OriGene 5' read for NM\_001749 unedited  
 CAGAATTTTGTAAACGACTCACTATAGGGCGGCCGGAATTCGGCACGAGGCCAGAACT  
 CCGGACGTGTGCGGCGCAGTGTGAGTCGCAGCCATGTTCTTGTTAACTCGTTCTTGAAGGG  
 CGGCGCGGCGGCGGCGGGGAGGCGGGGGCTGGGTGGGGGCTGGGAAATGTGCTTGG  
 AGGCTGATCAGCGGGGCGGGGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGTGGTGG  
 AGGCGGCGGTGGCGGTGGAACGGCCATGCGCATCTAGCGGAGTATCAGCGCCATCAG  
 CGAGCGGCTGCGCAGTACAACCCGGAGCCCCGCCCCACGCACACATTACTTCAACAT  
 TGAGGCCAACGAGAGTGANGAAGTCCGGCAGTTCGGGAGACTCTTTGCCAGCTGGCTGGA  
 GATGACTGAAGTCANCGCCACAGAACCATGAACATTCTCAATANGGGTGGACACGACAAC  
 CTGATCTGAAGACTGATTGGTTTTGCATTGACACATGTCGCAACATGGTGGCCCGTGATT  
 GATTACGACACCACAAGCCAGCTGTGCTTTGAAGAATCAAGTACTTGTGGAACCACCTCA  
 AAGGTGGGCGAGCATTATCAAACAAGTCGAAACTGAACGATCAGGGACATTTGCAGTAG  
 TGAACCCCCAGTGCTTTGAGCAGNCAGGTTTACCTGATGAGCATCTTATACATGATCA  
 TCCGACGCTCTCAAATGAAGTGGGACCATGGATNNTGACAACATCACTGCTTGTGAGG  
 CTGACGCATGGGTCCGTGCTTCAATCTCTGACAAGATGGACTGACAAATCAGTGACTNCC  
 AGGATGTGAGTGACTTGATTCTGACCTGAGCCAGACCCGCCCTACGCTGTTTAAAGAT  
 ACTGGACCTNGCTTCAAGNCGACTTGGTGGCAATTTTTTGGGGGGCG

**3' Read Nucleotide Sequence:**

>OriGene 3' read for NM\_001749 unedited  
 AGCTATGGACCGCGCCGCAATCTAGGATCGAGTTTTTTTTTTTTTTTTTTTGGAGATAG  
 CAACTGGGGCATGTTTATTTCTCTGGGCTGGCAGGCTGGGAGCAGAATATAGACAAA  
 GGCCTGGGGCACCTGGGTCTGGCAGGTCTGGAGCTTGGCCGCTGGGTAGCAACCGTG  
 AAGGGTGTGCCAGGGCGTGCAGGGACTGGAGTATCCTCCAGAAGTGAAGAGGGCCCT  
 CGGGGCATGGAGGCATCAAAAGTCTAGGCTTGGCACAGGTACAGGGGAGAGTTACGGA  
 GTGGGTGTGTGCAGGGCCTGGTGGGAATGGGGAGACCCGTGGACAGAGCTTGTTAGAGTG  
 TCCTAGAGCCAGGGGAACTCCAGGCAGGGCAAATTTGGGCCCTGGATGTTGAGAAGCTGG  
 GTAACAAGTACTGAGAGAACAAAAGCTTGTGGGTGAGCAGGCCCCACAAAGATGTGACTG  
 CAGACAGGATCGGCCCTGGGAGAGACCGAGGCTCCAGGTGACTCCTATAGCAAGGCGGTG  
 AGGGGGCGGGTCTGGGGCTCCAGTTCAGGAATACATAGTCAGCTGCAGCCACTCCTGGAT  
 GTTCACCTGGATTTGTCCAGTCCATCTTTGTCAAGAGATTTGAAGGCACGGAACATGGC  
 GTCCAGCCTGACCAAGCAGCTGATGAAGTTGTCAAATCCATGTTCCCACTTTTCATCTGA  
 GTAGCGTCGGATGATCATGTTATAGAGATGCTCATTTAGGTGGTACCCTGCTGCCTCAA  
 GGCACCTGGGAGNTCACTACTGCAAATGGTCCCTGATCGGTGAGTCCGAACTGTTTTGA  
 TATGGCCTGCCACCCTTTGATGGTGTCCACAAGTACTTGAATTTCTCAAGCCAGCTT  
 GCCTGGGNTGTCCTATCCATCACCGGCACATGCTGGGAATGNGTCATGCCACAACATCA  
 CT

**Restriction Sites:**

NotI-NotI

**ACCN:**

NM\_001749

**Insert Size:**

1430 bp

**OTI Disclaimer:** Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at [custsupport@origene.com](mailto:custsupport@origene.com) or by calling 301.340.3188 option 3 for pricing and delivery.

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](#)

**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\\_001749.2](#), [NP\\_001740.1](#)

**RefSeq Size:** 1492 bp

**RefSeq ORF:** 807 bp

**Locus ID:** 826

**UniProt ID:** [P04632](#)

**Cytogenetics:** 19q13.12

**Domains:** EFh

**Protein Families:** Druggable Genome, Protease

**Gene Summary:**

This gene is a member of the calpain small subunit family. Calpains are calcium-dependent cysteine proteinases that are widely distributed in mammalian cells. Calpains operate as heterodimers, comprising a specific large catalytic subunit (calpain 1 subunit in Calpain I, and calpain 2 subunit in Calpain II), and a common small regulatory subunit encoded by this gene. This encoded protein is essential for the stability and function of both calpain heterodimers, whose proteolytic activities influence various cellular functions including apoptosis, proliferation, migration, adhesion, and autophagy. Calpains have been implicated in neurodegenerative processes, such as myotonic dystrophy. A pseudogene of this gene has been defined on chromosome 1. Alternative splicing results in multiple transcript variants. [provided by RefSeq, Oct 2014]

Transcript Variant: This variant (1) represents the longest transcript and encodes the longest isoform (1). Variants 1, 2 and 3 encode the same protein.