

## Product datasheet for **SC322483**

### Caspase 3 (CASP3) (NM\_032991) Human Untagged Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Caspase 3 (CASP3) (NM_032991) Human Untagged Clone
Tag:	Tag Free
Symbol:	Caspase 3
Synonyms:	CPP32; CPP32B; SCA-1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC (PS100020)
E. coli Selection:	Ampicillin (100 ug/mL)



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**Fully Sequenced ORF:** >OriGene sequence for SC322483  
 CCGATGGGTGCTATTGTGAGCGGTTGTGGAAGAGTTTCGTGAGTGCTCGCAGCTCATAC  
 CTGTGGCTGTGTATCCGTGGCCACAGCTGGTTGGCGTCGCCTTAAAAATCCCAGGCCGTGA  
 GGAGTTAGCGAGCCCTGCTCACACTCGGCGCTCTGTTTTCGGTGGGTGTGCCCTGCACC  
 TGCCTCTTCCCCATTCTCATTAAATAAAGGTATCCATGGAGAACACTGAAAACTCAGTGG  
 ATTCAAAATCCATTAATAAATAAAGTAAACCAAGATCATAACATGGAAGCGAATCAATGGACT  
 CTGGAATATCCCTGGACAACAGTTATAAATGGATTATCCTGAGATGGGTTTATGTATAA  
 TAATTAATAATAAGAATTTTCATAAAAAGCACTGGAATGACATCTCGGTCTGGTACAGATG  
 TCGATGCAGCAAACCTCAGGAAAACATTAGAAAATTGAAATATGAAGTCAGGAATAAAA  
 ATGATCTTACACGTGAAGAAATTGTGGAATTGATGCGTGATGTTTCTAAAGAAGATCACA  
 GCAAAAGGAGCAGTTTTGTTGTGTGCTTCTGAGCCATGGTGAAGAAGGAATAATTTTTG  
 GAACAAATGGACCTGTTGACCTGAAAAAATAACAACTTTTTTCAGAGGGGATCGTTGTA  
 GAAGTCTAACTGGAACCCAACTTTTCATTATTCAGGCCTGCCGTGGTACAGAAGTGG  
 ACTGTGGCATTGAGACAGACAGTGGTGTGATGATGACATGGCGTGCATAAAAATACCAG  
 TGGAGGCCGACTTCTTGTATGCATACTCCACAGCACCTGGTTATTATTCTTGGCGAAATT  
 CAAAGGATGGCTCCTGGTTCATCCAGTCGCTTTGTGCCATGCTGAAACAGTATGCCGACA  
 AGCTTGAATTTATGCACATTCTTACCCGGTTAACCGAAAGGTGGCAACAGAATTTGAGT  
 CCTTTTCTTTGACGCTACTTTTCATGCAAGAAAACAGATTCCATGTATTGTTTCCATGC  
 TCACAAAAGAACTCTATTTTTATCACTAAAGAAATGGTTGGTGGTGGTTTTTTTTAGTT  
 TGTATGCCAAGTGAAGAAGATGGTATATTTGGTACTGTATTTCCCTCTCATTTTGACCTAC  
 TCTCATGCTGCAGAGGGTACTTTAAGACATACTCCTCCATCAATAGAACCACTATGAA  
 GCTACCTCAAACCTCCAGTCAGGTAGTTGCAATTGAATTAATTAAGGAATAAATAAAAAAT  
 GGATACTGGTGCAGTCATTATGAGAGGCAATGATTGTTAATTTACAGCTTTCATGATTAG  
 CAAGTTACAGTGATGCTGTGCTATGAATTTTCAAGTAATTGTGAAAAAGTTAAACATTGA  
 AGTAATGAATTTTTATGATATTTCCCCCACTTAAGACTGTGATTCTAGTTTTGTCAAAC  
 TGTAGAAATGATGATGTGGAAGAACTTAGGCATCTGTGGGCATGGTCAAAGGCTCAAACC  
 TTTATTTTAGAATTGATATACACGGATGACTTAACTGCATTTTTAGACCATTTATCTGGG  
 ATTATGGTTTTGTGATGTTTGCCTGAACACTTTTGTGTAATAAATAAATAAATGTT  
 TAATATTGAGAAAGAACTAATATTTTATGTGAGAGAAAGTGTGAGCAAACCTAATTGAC  
 TTTTAAGGCTAAAACCTAACATTATAGAGGGGTGGAGTTTTAACTGTAAGGTGTACAA  
 TGCCCTGGATCTACCAGCATAAATATCTTCTGATTTGTCCTATGCATATCAGTTGAGC  
 TTCATATACCAGCAATATATCTGAAGAGCTATTATATAAAAACCCCAAACCTGTTGATTAT  
 TAGCCAGGTAATGTGAATAAATCTATAGGAACATATGAAAAACAACCTAAATAATAAAA  
 CAGTGGAAATAAAGGAAAGCAATAAATGAATGGGCTGAGCTGCCTGTAACCTTGAGAGTAG  
 ATGTTTTGAGCCTGAGCAGAGACATGACTCAGCCTGTTCCATGAAGGCAGAGCCATGGAC  
 CACGCAGGAAGGGCCTACAGCCATTTCTCCATACGCACTGGTATGTGTGGATGATGCTG  
 CCAGGGGCCATCGCCAAGTAAGAAAGTGAAGCAAATCAGAACTTGTGAAGTGGAAATG  
 TTCTAAAGGTGGTGAAGCAATAAATAATCATAGTACTCTTTGTAGCAAAATCTTAAAGTAT  
 GTTATTTTCTGTTGAAGTTTACAATCAAAGGAAAATAGTAATGTTTTTACTGTTTACTG  
 AAAGAAAAAGACCTATGAGCACATAGGACTCTAGACGGCATCCAGCCGGAGGCCAGAGCT  
 GAGCCCTCAGCCCGGAGGCAGGCTCCAGGCCTCAGCAGGTGCGGAGCCGTCCTGCACC  
 AAGTCTCACTGGCTGTCAGTATGACATTTACGGGAGATTTCTTGTGCTCAAAAAATGA  
 GCTCGGTTTTGCAATGACAGTTTCTTTTTTCTTACTAGACCTGTAACCTTTGTAATAAC  
 ACATAGCATGAATGGTATCTTAAAGTGTGTTTCTATGTGACAATTTGTACAAATTTGT  
 TATTTTCCATTTTTATTTCAAAAATACATTCAAACCTAAAATTAATAAAAAAAAAAAAAA

**Restriction Sites:** Please inquire

**ACCN:** NM\_032991

<b>OTI Disclaimer:</b>	<p>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 <a href="mailto:custsupport@origene.com">custsupport@origene.com</a> or by calling 301.340.3188 option 3 for pricing and delivery.</p> <p>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. <a href="#">More info</a></p>
<b>OTI Annotation:</b>	<p>This TrueClone is provided through our Custom Cloning Process that includes sub-cloning into OriGene's pCMV6 vector and full sequencing to provide a non-variant match to the expected reference without frameshifts, and is delivered as lyophilized plasmid DNA.</p>
<b>Components:</b>	<p>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).</p>
<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_032991.2</a> , <a href="#">NP_116786.1</a>
<b>RefSeq Size:</b>	2522 bp
<b>RefSeq ORF:</b>	834 bp
<b>Locus ID:</b>	836
<b>UniProt ID:</b>	<a href="#">P42574</a>
<b>Cytogenetics:</b>	4q35.1
<b>Domains:</b>	CASc, ICE_p10, ICE_p20
<b>Protein Families:</b>	Druggable Genome, ES Cell Differentiation/IPS, Protease
<b>Protein Pathways:</b>	Alzheimer's disease, Amyotrophic lateral sclerosis (ALS), Apoptosis, Colorectal cancer, Epithelial cell signaling in Helicobacter pylori infection, Huntington's disease, MAPK signaling pathway, Natural killer cell mediated cytotoxicity, p53 signaling pathway, Parkinson's disease, Pathways in cancer, Viral myocarditis

**Gene Summary:**

The protein encoded by this gene is a cysteine-aspartic acid protease that plays a central role in the execution-phase of cell apoptosis. The encoded protein cleaves and inactivates poly(ADP-ribose) polymerase while it cleaves and activates sterol regulatory element binding proteins as well as caspases 6, 7, and 9. This protein itself is processed by caspases 8, 9, and 10. It is the predominant caspase involved in the cleavage of amyloid-beta 4A precursor protein, which is associated with neuronal death in Alzheimer's disease. [provided by RefSeq, Aug 2017]

Transcript Variant: This variant (2, also known as beta) differs in the 5' UTR compared to variant 1. Variants 1, 2, and 3 all encode the same isoform (a).