

## Product datasheet for **SC117580**

### Cathepsin S (CTSS) (NM\_004079) Human Untagged Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Cathepsin S (CTSS) (NM_004079) Human Untagged Clone
Tag:	Tag Free
Symbol:	Cathepsin S
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 NM\_004079.3  
 TTAGAAGAGAGCCCACTAATTCAAGGACTCTTACCGTGGGAGCAACTGCTGGTTCTATCA  
 CAATGAAACGGCTGGTTTGTGTGCTCTTGGTGTGCTCCTCTGCAGTGGCAGATTGCATA  
 AAGATCCTACCCTGGATCACCCTGGCATCTCTGGAAGAAAACCTATGGCAAACAATACA  
 AGGAAAAGAATGAAGAAGCAGTACGACGTCTCATCTGGGAAAAGAATCTAAAGTTTGTGA  
 TGCTTACAACTGGAGCATTCAATGGGAATGCACTCATACGATCTGGGCATGAACCACC  
 TGGGAGACATGACCAGTGAAGAAGTGATGTCTTTGATGAGTTCCTGAGAGTCCCAGCC  
 AGTGGCAGAGAAATATCACATATAAGTCAAACCCTAATTGGATATTGCCTGATTCTGTGG  
 ACTGGAGAGAGAAAGGGTGTGTTACTGAAGTGAATATCAAGGTTCTTGTGGTGTGCT  
 GGGCTTTCAGTGTGTGGGGGCCCTGGAAGCACAGCTGAAGCTGAAAACAGGAAAGCTGG  
 TGTCTCTCAGTGGCCAGAACCTGGTGGATTGCTCAACTGAAAAATATGGAACAAAGGCT  
 GCAATGGTGGCTTCATGACAACGGCTTCCAGTACATCATTGATAACAAGGCATCGACT  
 CAGACGCTTCTATCCCTACAAAGCCATGGATCAGAAATGTCAATAGACTCAAAATATC  
 GTGCTGCCACATGTTCAAAGTACTGAACCTTCTTATGGCAGAGAAGATGCTCTGAAAG  
 AAGCTGTGGCCAATAAAGGCCAGTGTCTGTTGGTGTAGATGCGCGTCATCCTTCTTCT  
 TCCTCTACAGAAGTGGTGTCTACTATGAACCATCCTGTACTCAGAATGTGAATCATGGTG  
 TACTTGTGGTTGGCTATGGTGATCTTAATGGGAAAGAATACTGGCTTGTGAAAAACAGCT  
 GGGGCCACAACCTTGGTGAAGAAGGATATATTCGGATGGCAAGAAATAAAGGAAATCATT  
 GTGGGATTGCTAGCTTCCCTCTTACCCAGAAATCTAGAGGATCTCTCCTTTTTATAACA  
 AATCAAGAAATATGAAGCACTTCTCTTAACCTAATTTTTCTGCTGTATCCAGAAGAAA  
 TAATTGTGTCATGATTAATGTGATTTACTGTACTAATTAGAAAAATAGTTTGAGGCCG  
 GGCACGGTGGCTCACGCTGTAATCCCAGTACTGGGAGGCCAAGGCAGGCATATCAACT  
 TGAGGCCAGGAGTTAAAGAGCAGCCTGGCTAACATGGTGAACCCCATCTCTACTAAAA  
 TACAAAAAATTAGCCGAGCACGGTGGTGCATGCCTGTAATCCCAGCTACTTGGGAGGCTG  
 AGGCACGAGATTCTTGAACCCAAGAGGTTGAGGCTATGTTGAGCTGAGATCACACCACT  
 GACTCCAGCCTGGATGACAGAGTGGAGACTCTGTTTCAAAAAACAGAAAAGAAAATAT  
 AGTTTGATTCTTCATTTTTTAAATTTGCAAAATCTCAGGATAAAGTTTGCTAAGTAAAT  
 AGTAATGACTATAGATATAACTGTACAAAAATGTTCAACCTAAACAATCTGTAATTG  
 CTTATTGTTTTATTGTACTCTTTGTCTTTAAGACCCCTAATAGCCTTTTGTAACCTG  
 ATGGCTTAAAAAATACTTAATAAATCTGCCATTTCAAATTTCAAAAAAAAAAAAAAAAAAAA  
 AAA

**Restriction Sites:** NotI-NotI

**ACCN:** NM\_004079

**Insert Size:** 1890 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](#)

<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_004079.3</a> , <a href="#">NP_004070.3</a>
<b>RefSeq Size:</b>	4100 bp
<b>RefSeq ORF:</b>	996 bp
<b>Locus ID:</b>	1520
<b>UniProt ID:</b>	<a href="#">P25774</a>
<b>Cytogenetics:</b>	1q21.3
<b>Domains:</b>	Pept_C1
<b>Protein Families:</b>	Druggable Genome, Protease
<b>Protein Pathways:</b>	Antigen processing and presentation, Lysosome
<b>Gene Summary:</b>	<p>The preproprotein encoded by this gene, a member of the peptidase C1 family, is a lysosomal cysteine proteinase that participates in the degradation of antigenic proteins to peptides for presentation on MHC class II molecules. The mature protein cleaves the invariant chain of MHC class II molecules in endolysosomal compartments and enables the formation of antigen-MHC class II complexes and the proper display of extracellular antigenic peptides by MHC-II. The mature protein also functions as an elastase over a broad pH range. When secreted from cells, this protein can remodel components of the extracellular matrix such as elastin, collagen, and fibronectin. This gene is implicated in the pathology of many inflammatory and autoimmune diseases and, given its elastase activity, plays a significant role in some pulmonary diseases. Alternatively spliced transcript variants encoding distinct isoforms have been found for this gene. [provided by RefSeq, May 2020]</p> <p>Transcript Variant: This variant (1) encodes a longer isoform (1). Sequence Note: This RefSeq record was created from transcript and genomic sequence data to make the sequence consistent with the reference genome assembly. The genomic coordinates used for the transcript record were based on transcript alignments.</p>