

## Product datasheet for **RG233630**

### Cathepsin S (CTSS) (NM\_001199739) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Cathepsin S (CTSS) (NM_001199739) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Cathepsin S
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>RG233630 representing NM_001199739 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGAAACGGCTGGTTTGTGTGCTCTTGGTGTGCTCCTCTGCAGTGGCACAGTTGCATAAAGATCCTACCC  
TGGATCACCACCTGGCATCTCTGGAAGAAAACCTATGGCAAACAATACAAGGAAAAGAATGAAGAAGCAGT  
ACGACGTCTCATCTGGGAAAAGAATCTAAAGTTTGTGATGCTTCAACCTGGAGCATTCAATGGGAATG  
CACTCATACGATCTGGGCATGAACCACCTGGGAGACATGGGTTCTTGTGGTCTTGTCTCAGTGGCCAGAACCT  
CTGTGGGGCCCTGGAAGCACAGCTGAAGCTGAAAACAGGAAAGCTGGTGTCTCAGTGGCCAGAACCT  
GGTGGATTGCTCAACTGAAAAATATGAAAACAAAGGCTGCAATGGTGGCTTCATGACAACGGCTTTCCAG  
TACATCATTGATAACAAGGCATCGACTCAGACGCTTCCATCCCTACAAAGCCATGGATCAGAAATGTC  
AATATGACTCAAAATATCGTGCTGCCACATGTTCAAAGTACACTGAACTTCTTATGGCAGAGAAGATGT  
CCTGAAAGAAGCTGTGGCCAATAAAGGCCAGTGTCTGTTGGTGTAGATGCGCGTCATCCTTCTTTCTTC  
CTCTACAGAAGTGGTGTCTACTATGAACCATCCTGTACTCAGAATGTGAATCATGGTGTACTTGTGGTTG  
GCTATGGTGATCTTAATGGGAAAGAATACTGGCTTGTGAAAACAGCTGGGGCCACAACCTTGGTGAAGA  
AGGATATATTCGGATGGCAAGAAATAAAGGAAATCATTGTGGGATTGCTAGCTTTCCTCTTACCCAGAA  
ATC

**ACGCGT**ACGCGGCCGCTCGAG - GFP Tag - GTTTAA



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**Protein Sequence:** >RG233630 representing NM\_001199739  
 Red=Cloning site Green=Tags(s)

MKRLVCVLLVCSSAVAQLHKDPTLDHWHWLWKKTYGKQYKEKNEEAVRRLIWEKNLKFVMLHNLEHSMGM  
 HSYDLGMNHLGDMGSCGACWAFSAVGALEAQLKLTGKLVSLSAQNLVDCSTEKYGNKGCNGGFMTTAFQ  
 YIIDNKGIDSDASYPYKAMDQKQYDSKYRAATCSKYTELPGREDVLKEAVANKGPVSVGVGDARHPSFF  
 LYRSGVYYEPSCTQNVNHGVLVVGYGDLNGKEYWLKNSWGHNFGEEGYIRMARNKGNHCGIASFPSTY  
 I

TRTRPLE - GFP Tag - V

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**



**ACCN:** NM\_001199739

**ORF Size:** 843 bp

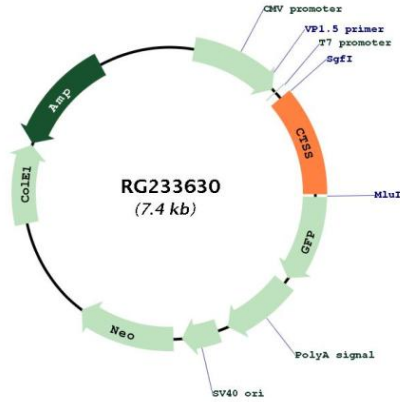
**OTI Disclaimer:** The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone 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).

<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_001199739.2</a>
<b>RefSeq Size:</b>	3957 bp
<b>RefSeq ORF:</b>	846 bp
<b>Locus ID:</b>	1520
<b>UniProt ID:</b>	<a href="#">P25774</a>
<b>Cytogenetics:</b>	1q21.3
<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>

Product images:



Circular map for RG233630