

## Product datasheet for **RG223541**

### Cathepsin L (CTSL) (NM\_145918) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Cathepsin L (CTSL) (NM_145918) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Cathepsin L
Synonyms:	CATL; CTSL1; MEP
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>RG223541 representing NM_145918 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGAATCCTACACTCATCCTTGCTGCCTTTTGCCTGGGAATTGCCTCAGCTACTCTAACATTTGATCACA  
GTTTAGAGGCACAGTGGACCAAGTGAAGGCGATGCACAACAGATTATACGGCATGAATGAAGAAGGATG  
GAGGAGAGCAGTGTGGGAGAAGAACGTGAAGATGATTGAACTGCACAATCAGGAATACAGGAAGGGAAA  
CACAGCTTCACAATGGCCATGAACGCCTTTGGAGACATGACCAGTGAAGAATTCAGGCAGGTGATGAATG  
GCTTTCAAACCGTAAGCCAGGAAGGGAAAAGTGTCCAGGAACCTCTGTTTTATGAGGCCCCAGATC  
TGTGGATTGGAGAGAGAAAGGCTACGTGACTCCTGTGAAGAATCAGGGTCAGTGTGGTCTTGTGGGCT  
TTTAGTGCTACTGGTCTTGAAGGACAGATGTTCCGGAAAACCTGGGAGGCTTATCTCACTGAGTGAGC  
AGAATCTGGTAGACTGCTCTGGGCCTCAAGGCAATGAAGGCTGCAATGGTGGCCTAATGGATTATGCTTT  
CCAGTATGTTCCAGGATAATGGAGGCCTGGACTCTGAGGAATCCTATCCATATGAGGCAACAGAAGAATCC  
TGTAAGTACAATCCAAGTATTCTGTTGCTAATGACACCGGCTTTGTGGACATCCCTAAGCAGGAGAAGG  
CCCTGATGAAGGCAGTTGCAACTGTGGGGCCCATTTCTGTTGCTATTGATGCAGGTCATGAGTCTTCTCT  
GTTCTATAAAGAAGGCATTTATTTTGGCCAGACTGTAGCAGTGAAGACATGGATCATGGTGTGCTGGTG  
GTTGGCTACGGATTTGAAAGCACAGAATCAGATAACAATAAATATTGGCTGGTGAAGAACAGCTGGGGTG  
AAGAATGGGGCATGGGTGCTACGTAAGATGGCCAAAGACCGGAGAAACCATTGTGGAATTGCCCTCAGC  
AGCCAGCTACCCCACTGTG

**ACGCGT**ACGCGGCCGCTCGAG - GFP Tag - GTTTAA



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**Protein Sequence:** >RG223541 representing NM\_145918  
Red=Cloning site Green=Tags(s)

MNPTLILAAFLGLIASATLTFDHSLEAQWTKWKAMHNRLYGMNEEGWRRRAVWEKNVKMIELHNQEYREGK  
 HSFTMAMNAFGDMTSEEFQVMNGFQNRKPRKGVFQEPLFYEA PRSVDWREKGYVTPVKNQGCGSCWA  
 FSATGALEGQMFRTGRLISLSEQNLVDCSGPQNGEGCNGLMDYAFQYVQDNGGLDSEESYPYEATEES  
 CKYNPKYSVANDTGFVDIPKQEKALMKAVATVGPISVAIDAGHESFLFYKEGIYFEPDCSSEMDHGVLV  
 VGYGFESTESDNNKYWLVKNSWGEEWGMGGYVKMAKDRRNHCIGIASAASYPTV

TRTRPLE - GFP Tag - V

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**



**ACCN:** NM\_145918

**ORF Size:** 999 bp

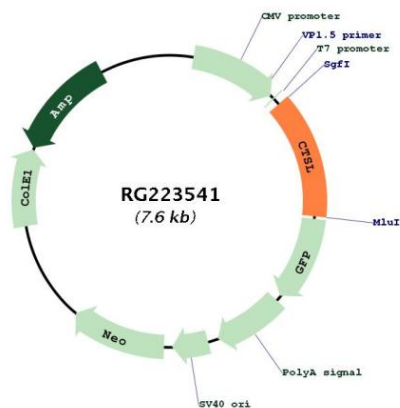
**OTI Disclaimer:** The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone 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_145918.1</a> , <a href="#">NP_666023.1</a>
<b>RefSeq Size:</b>	1487 bp
<b>RefSeq ORF:</b>	1002 bp
<b>Locus ID:</b>	1514
<b>UniProt ID:</b>	<a href="#">P07711</a>
<b>Cytogenetics:</b>	9q21.33
<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 protein encoded by this gene is a lysosomal cysteine proteinase that plays a major role in intracellular protein catabolism. Its substrates include collagen and elastin, as well as alpha-1 protease inhibitor, a major controlling element of neutrophil elastase activity. The encoded protein has been implicated in several pathologic processes, including myofibril necrosis in myopathies and in myocardial ischemia, and in the renal tubular response to proteinuria. This protein, which is a member of the peptidase C1 family, is a dimer composed of disulfide-linked heavy and light chains, both produced from a single protein precursor. Additionally, this protein cleaves the S1 subunit of the SARS-CoV-2 spike protein, which is necessary for entry of the virus into the cell. [provided by RefSeq, Aug 2020]</p>

Product images:



Circular map for RG223541