

Product datasheet for **RC231856**

Cathepsin L (CTSL) (NM_001257973) Human Tagged ORF Clone

Product data:

Product Type: Expression Plasmids
Product Name: Cathepsin L (CTSL) (NM_001257973) Human Tagged ORF Clone
Tag: Myc-DDK
Symbol: CTSL
Synonyms: CATL; CTSL1; MEP
Vector: pCMV6-Entry (PS100001)
E. coli Selection: Kanamycin (25 ug/mL)
Cell Selection: Neomycin
ORF Nucleotide Sequence: >RC231856 representing NM_001257973
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGGATCGCC**

**ATGGATTATGCTTTCCAGTATGTTCCAGGATAATGGAGGCCTGGACTCTGAGGAATCCTATCCATATGAGG
CAACAGAAGAATCCTGTAAGTACAATCCCAAGTATTCTGTTGCTAATGACACCGGCTTTGTGGACATCCC
TAAGCAGGAGAAGGCCCTGATGAAGGCAGTTGCAACTGTGGGGCCATTCTGTTGCTATTGATGCAGGT
CATGAGTCCTTCCTGTTCTATAAAGAAGGCATTTATTTTGGAGCCAGACTGTAGCAGTGAAGACATGGATC
ATGGTGTGCTGGTGGTTGGCTACGGATTTGAAAGCACAGAATCAGATAACAATAAATATTGGCTGGTGAA
GAACAGCTGGGGTGAAGAATGGGCATGGTGGCTACGTAAGATGGCCAAAGACCGGAGAAACCATTGT
GGAATTGCCTCAGCAGCCAGCTACCCCACTGTG**

**ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA**

Protein Sequence: >RC231856 representing NM_001257973
Red=Cloning site Green=Tags(s)

MDYAFQYVQDNGGLDSEESYPYEATEESCKYNPKYSVANDTGFVDIPKQEKALMKAVATVGPISVAIDAG
HESFLFYKEGIYFEPDCSSEMDHGVLVVGYGFESTESDNKYLKNSWGEWGMGGYVKMAKDRRNIC
GIASAASYPTV

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites: Sgfl-MluI

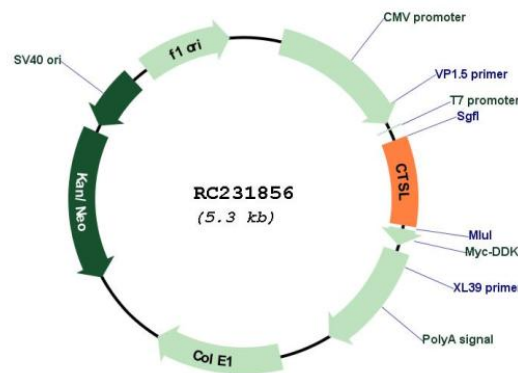


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Cloning Scheme:



Plasmid Map:



ACCN: NM_001257973

ORF Size: 453 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).
Reconstitution Method:	<ol style="list-style-type: none">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:	<u>NM_001257973.2</u>
RefSeq Size:	1141 bp
RefSeq ORF:	456 bp
Locus ID:	1514
Cytogenetics:	9q21.33
Protein Families:	Druggable Genome, Protease
Protein Pathways:	Antigen processing and presentation, Lysosome
MW:	17.3 kDa
Gene Summary:	<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>