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Product datasheet for RC201215

Cathepsin S (CTSS) (NM_004079) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Cathepsin S (CTSS) (NM_004079) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Cathepsin S
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)

ORF Nucleotide Sequence:

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>RC201215 ORF sequence
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGAAACGGCTGGTTTGTGTGCTCTTGGTGTGCTCCTCTGCAGTGGCACAGTTGCATAAAGATCCTACCC
TGGATCACCACTGGCATCTCTGGAAGAAAACCTATGGCAAACAATACAAGGAAAAGAATGAAGAAGCAGT
ACGACGTCTCATCTGGGAAAAGAATCTAAAGTTTGTGATGCTTCACAACCTGGAGCATTCAATGGGAATG
CACTCATACGATCTGGGCATGAACCACCTGGGAGACATGACCAGTGAAGAAGTGATGTCTTTGATGAGTT
CCCTGAGAGTTCCCAGCCAGTGGCAGAGAAATATCACATATAAGTCAAACCCTAATTGGATATTGCCTGA
TTCTGTGGACTGGAGAGAGAAAGGGTGTGTTACTGAAGTGAAATATCAAGGTTCTTGTGGTGCTTGCTGG
GCTTTCAGTGCTGTGGGGGCCCTGGAAGCACAGCTGAAGCTGAAAACAGGAAAGCTGGTGTCTCTCAGTG
CCCAGAACCTGGTGGATTGCTCAACTGAAAAATATGGAAACAAAGGCTGCAATGGTGGCTTCATGACAAC
GGCTTTCCAGTACATCATTGATAACAAGGGCATCGACTCAGACGCTTCCTATCCCTACAAAGCCATGGAT
CAGAAATGTCAATATGACTCAAAATATCGTGCTGCCACATGTTCAAAGTACACTGAACTTCCTTATGGCA
GAGAAGATGTCCTGAAAGAAGCTGTGGCCAATAAAGGCCCAGTGTCTGTTGGTGTAGATGCGCGTCATCC
TTCTTTCTTCCTCTACAGAAGTGGTGTCTACTATGAACCATCCTGTACTCAGAATGTGAATCATGGTGTA
CTTGTGGTTGGCTATGGTGATCTTAATGGGAAAGAATACTGGCTTGTGAAAAACAGCTGGGGCCACAACT
TTGGTGAAGAAGGATATATTCGGATGGCAAGAAATAAAGGAAATCATTGTGGGATTGCTAGCTTTCCCTC
TTACCCAGAAATC

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA
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Protein Sequence:

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>RC201215 protein sequence
Red=Cloning site Green=Tags(s)

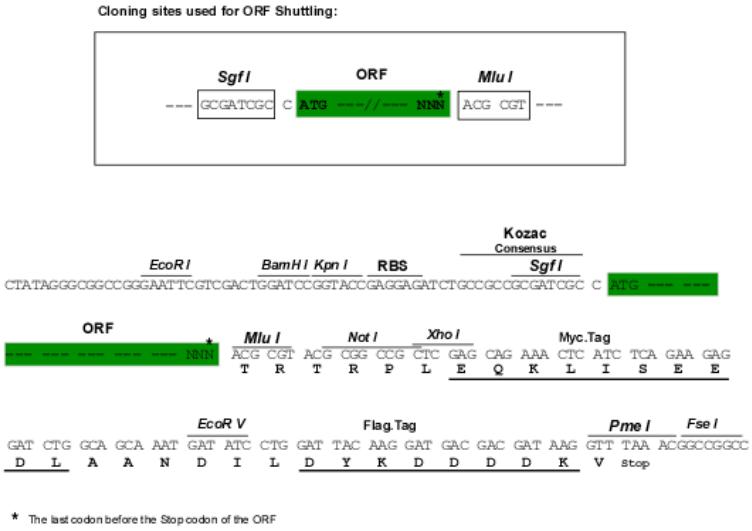
MKRLVCVLLVCSSAVAQLHKDPTLDHHWHLWKKTYGKQYKEKNEEAVRRLIWEKNLKFVMLHNLEHSMGM
HSYDLGMNHLGDMTSEEVMSLMSSLRVPSQWQRNITYKSNPNWILPDSVDWREKGCVTEVKYQGSCGACW
AFSAVGALEAQLKLKTGKLVSLSAQNLVDCSTEKYGNKGCNGGFMTTAFQYIIDNKGIDSDASYPYKAMD
QKCQYDSKYRAATCSKYTELPYGREDVLKEAVANKGPVSVGVDARHPSFFLYRSGVYYEPSCTQNVNHGV
LVVGYGDLNGKEYWLVKNSWGHNFGEEGYIRMARNKGNHCGIASFPSYPEI

TRTRPLEQKLISEEDLAANDILDYKDDDDKV
```

Chromatograms: https://cdn.origene.com/chromatograms/mk6193_c08.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_004079

ORF Size: 993 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 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

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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:	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.
Note:	Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.
RefSeq:	NM_004079.2
RefSeq Size:	4107 bp
RefSeq ORF:	996 bp
Locus ID:	1520
UniProt ID:	P25774
Cytogenetics:	1q21.3
Domains:	Pept_C1
Protein Families:	Druggable Genome, Protease
Protein Pathways:	Antigen processing and presentation, Lysosome
MW:	37.5 kDa
Gene Summary:	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]

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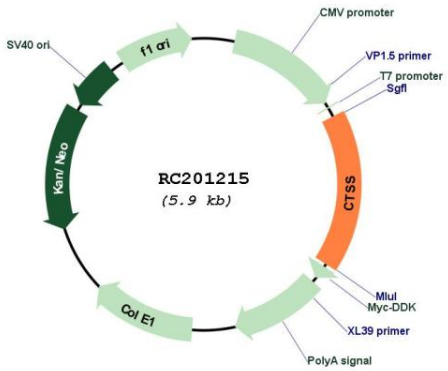
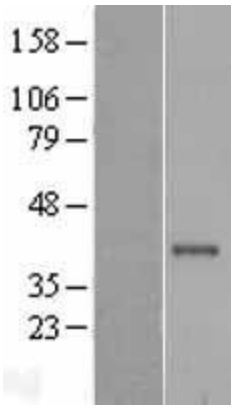
Product images:



Circular map for RC201215



Western blot validation of overexpression lysate (Cat# [LY401317]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from un-transfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC201215 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).

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