

Product datasheet for RC200719

Cathepsin D (CTSD) (NM_001909) Human Tagged ORF Clone

Product data:

| | |
|---------------------------|---|
| Product Type: | Expression Plasmids |
| Product Name: | Cathepsin D (CTSD) (NM_001909) Human Tagged ORF Clone |
| Tag: | Myc-DDK |
| Symbol: | Cathepsin D |
| Synonyms: | CLN10; CPSD; HEL-S-130P |
| Mammalian Cell Selection: | Neomycin |
| Vector: | pCMV6-Entry (PS100001) |
| E. coli Selection: | Kanamycin (25 ug/mL) |
| ORF Nucleotide Sequence: | >RC200719 ORF sequence Red=Cloning site Blue=ORF Green=Tags(s) |

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGCAGCCCTCCAGCCTTCTGCCGCTCGCCCTCTGCCTGCTGGCTGCACCCGCCTCCGCGCTCGTCAGGA
TCCCGTGCACAAGTTCACGTCCATCCGCCGACCATGTCGGAGGTTGGGGGCTCTGTGGAGGACCTGAT
TGCCAAAGGCCCGTCTCAAAGTACTCCAGGCGGTGCCAGCCGTGACCGAGGGGCCATTCCCGAGGTG
CTCAAGAACTACATGGACGCCAGTACTACGGGGAGATTGGCATCGGGACGCCCCCAGTGCTTACAG
TCGTCTTCGACACGGGCTCCTCAACCTGTGGTCCCCTCCATCCACTGCAAAGTCTGGACATCGCTTG
CTGGATCCACCACAAGTACAACAGCGACAAGTCCAGCACCTACGTGAAGAATGGTACCTCGTTTGACATC
CACTATGGCTCGGGCAGCCTCTCCGGGTACCTGAGCCAGGACACTGTGTGGTGCCTGCCAGTCAGCGT
CGTCAGCCTCTGCCCTGGGCGGTGTCAAAGTGGAGAGGAGGTCTTTGGGGAGGCCACCAAGCAGCCAGG
CATCACCTTATCGCAGCCAAGTTTCATGGCATCCTGGGCATGGCCTACCCCGCATCTCCGTCAACAAC
GTGCTGCCCGTCTTCGACAACCTGATGCAGCAGAAGCTGGTGGACCAGAACATCTTCTCCTTCTACCTGA
GCAGGGACCCAGATGCGCAGCCTGGGGGTGAGCTGATGCTGGTGGCACAGACTCCAAGTATTACAAGGG
TTCTCTGTCTACCTGAATGTCAACCGCAAGGCCTACTGGCAGGTCCACCTGGACCAGGTGGAGGTGGCC
AGCGGGCTGACCCTGTGCAAGGAGGGCTGTGAGGCCATTGTGGACACAGGCACTCCCTCATGGTGGGCC
CGGTGGATGAGGTGCGCGAGCTGCAGAAGGCCATCGGGGCGTGGCGCTGATTCAGGGCGAGTACATGAT
CCCCTGTGAGAAGGTGTCCACCCTGCCCGCATCACACTGAAGCTGGGAGGCAAAGGCTACAAGCTGTCC
CCAGAGGACTACAGCTCAAGGTGTGCGAGGCCGGAAGACCCTCTGCCTGAGCGGCTTTCATGGGCATGG
ACATCCCGCCACCCAGCGGGCCACTCTGGATCCTGGGCGACGTCTTCATCGGCCGCTACTACACTGTGTT
TGACCGTGACAACAACAGGGTGGGCTTCGCCGAGGCTGCCCGCCTC

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA



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Protein Sequence: >RC200719 protein sequence
Red=Cloning site Green=Tags(s)

MQPSSLLPLALCLLAAPASALVRIPLHKFTSIRRTMSEVGGSVEDLIAKGPVSKYSQAVPAVTEGPIPEV
 LKNYMDAQYYGEIGIGTPPQCFTVVFDTGSSNLWVPSIHCKLLDIACWIHHKYNSDKSSTYVKNGTSFDI
 HYGSGSLSGYLSQDTVSVPCQSASSASALGGVKVERQVFGATKQPGITFIAAKFDGILGMAYPRISVNN
 VLPVFDNLMQQKLVQNIFFSYLSRDPDAQPGGELMLGGTDSKYKGSLSYLNVTRKAYWQVHLDQVEVA
 SGLTLCKEGCEAIVDTGTSLMVGPDVRELVKAIIGAVPLIQGEYMIPEKRVSTLPAITLKLGGKGYKLS
 PEDYTLKVSQAGKTLCLSGFMGMDIPPPSGPLWILGDVFIGRYTYVFRDNNRVGFEEAARL

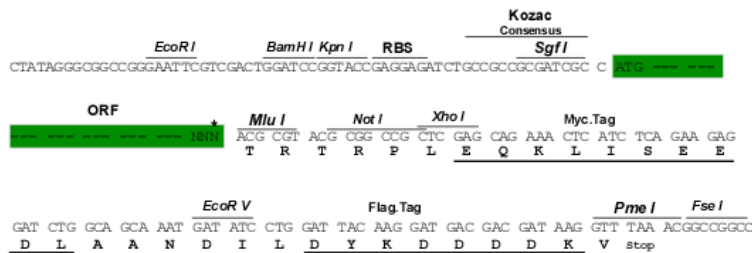
TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk6052_g04.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:

Cloning sites used for ORF Shuttling:



* The last codon before the Stop codon of the ORF

ACCN: NM_001909

ORF Size: 1236 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:

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_001909.5](#)

RefSeq Size: 2141 bp

RefSeq ORF: 1239 bp

Locus ID: 1509

UniProt ID: [P07339](#)

Cytogenetics: 11p15.5

Domains: asp

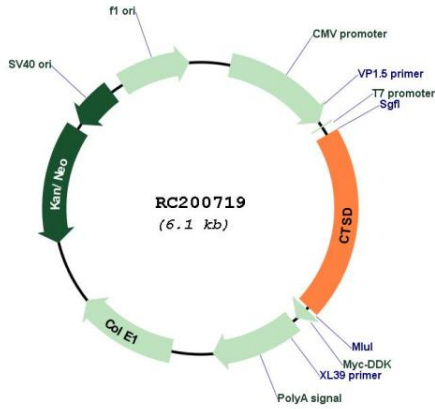
Protein Families: Druggable Genome, Protease

Protein Pathways: Lysosome

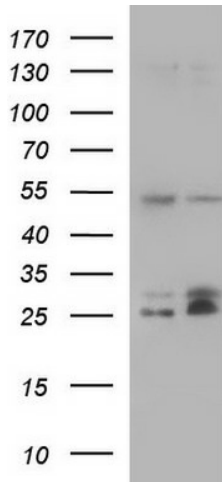
MW: 44.6 kDa

Gene Summary: This gene encodes a member of the A1 family of peptidases. The encoded preproprotein is proteolytically processed to generate multiple protein products. These products include the cathepsin D light and heavy chains, which heterodimerize to form the mature enzyme. This enzyme exhibits pepsin-like activity and plays a role in protein turnover and in the proteolytic activation of hormones and growth factors. Mutations in this gene play a causal role in neuronal ceroid lipofuscinosis-10 and may be involved in the pathogenesis of several other diseases, including breast cancer and possibly Alzheimer's disease. [provided by RefSeq, Nov 2015]

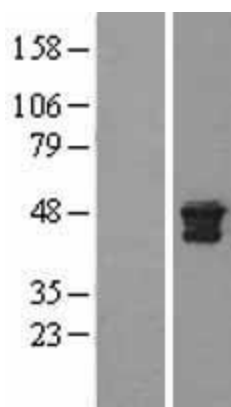
Product images:



Circular map for RC200719



HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY CTSD (Cat# RC200719, Right lane) cDNA for 48 hrs and lysed. Equivalent amounts of cell lysates (5 ug per lane) were separated by SDS-PAGE and immunoblotted with anti-CTSD (Cat# [TA590104]). Positive lysates [LY400712] (100ug) and [LC400712] (20ug) can be purchased separately from OriGene.



Western blot validation of overexpression lysate (Cat# [LY400712]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC200719 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).