

Product datasheet for RC202195

Cystathionase (CTH) (NM_001902) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Cystathionase (CTH) (NM_001902) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Cystathionase
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC202195 ORF sequence Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCCGCCCGATCGCC

ATGCAGGAAAAAGACGCCTCCTCACAAGTTTCTGCCACACTTCCAACATTTGCCACGCAGGCGATCC
ATGTGGGCCAGGATCCAGAGCAATGGACCTCCAGGGCTGTAGTGCCCCCATCTCACTGTCCACCACGTT
CAAGCAAGGGGCGCCTGGCCAGCACTCGGGTTTGAATATAGCCGTTCTGGAAATCCCACTAGGAATTGC
CTTGAAAAAGCAGTGGCAGCACTGGATGGGCTAAGTACTGTTTGGCCTTTGCTTCAGGTTTAGCAGCCA
CTGTAACATTACCCATCTTTAAAAGCAGGAGACCAAATTTGTATGGATGATGTGTATGGAGGTAC
AAACAGGTACTTCAGGCAAGTGGCATCTGAATTTGGATTAAGATTTCTTTTGGTATTGTTCCAAAATC
AAATTAAGTACTAGAGCAGCAATTACACCAGAAACCAAGCTTGTGGATCGAAACCCCAAAACCCACCC
AGAAGGTGATTGACATTGAAGGCTGTGCACATATTGTCCATAAGCATGGAGACATTATTTGGTCGTGGA
TAACACTTTTATGTCACCATATTTCCAGCGCCCTTTGGCTCTGGGAGCTGATATTCTATGTATTCTGCA
ACAAAATACATGAATGGCCACAGTGTGTTGAATGGCCTGGTGTCTGTTAATTGTGAAAGCCTTCATA
ATAGACTTCGTTTCTTGCAAACTCTCTGGAGCAGTTCCATCTCCTATTGATTGTTACCTCTGCAATCG
AGGTCTGAAGACTCTACATGTCCGAATGAAAAAGCATTTCAAAACGGAATGGCAGTTGCCAGTTCCTG
GAATCTAATCCTTGGGTAGAAAAGTTATTTATCCTGGGCTGCCCTCTCATCCACAGCATGAGTTGGTGA
AGCGTCAGTGTACAGTTGTACAGGGATGGTACCTTTTATTAAGGGCACTCTTCAGCATGCTGAGAT
TTTCCTCAAGAACCTAAAGCTATTTACTCTGGCCGAGAGCTTGGGAGGATTCGAAAGCCTTGCTGAGCTT
CCGGCAATCATGACTCATGCATCAGTTCTTAAGAATGACAGAGATGTCCTTGAATTAGTGACACACTGA
TTCGACTTTCTGTGGCTTAGAGGATGAGGAAGACCTACTGGAAGATCTAGATCAAGCTTTGAAGGCAGC
ACACCCTCAAGTGAAGTCACAGC

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA



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Protein Sequence: >RC202195 protein sequence
Red=Cloning site Green=Tags(s)

MQEKDASSQGFLPHFQHFATQAIHVGQDPEQWTSRAVVPPISLSTTFKQGAPGQHSGFYSRSGNPTRNC
 LEKAVAALDGAKYCLAFASGLAATVTITHLLKAGDQIICMDDVYGGTNRVFRQVASEFGLKISFVDCSKI
 KLLLEAAITPETKLVWIEPTNPTQKVIDIEGCAHIVHKHGDIIILVVDNTFMSPYFQRPLALGADISMYS
 TKYMNHSDVVMGLVSVNCESLHNRLRFLQNSLGAVPSPIDCYLCNRGLKTLHVRMEKHFKNMVAQFL
 ESNPWVEKVIYPGLPSHPQHELVKRQCTGCTGMVTFYIKGTLQHAEIFLKNLKLFLAESLGGFESLAEL
 PAIMTHASVLKNDRDVLGISDTLIRLSVGLDEEEDLLEDLDQALKAHPPSGSHS

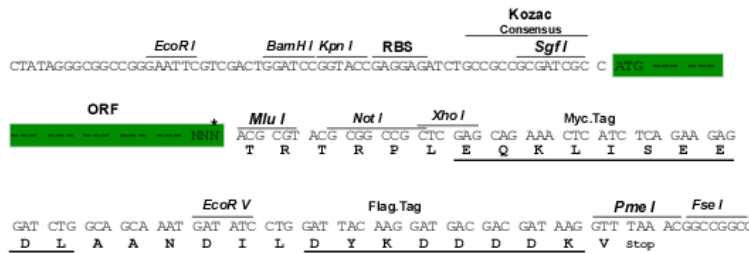
TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk6307_c03.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_001902

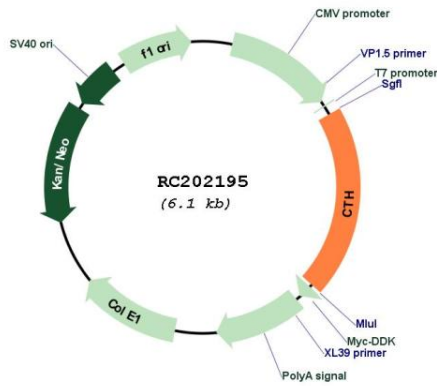
ORF Size: 1215 bp

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.

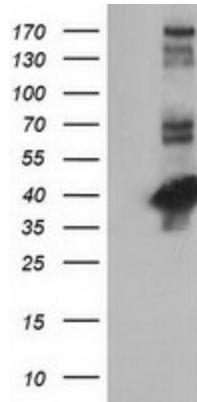
The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in agreement with the reference, but a complete review of all prevailing variants is recommended prior to use. [More info](#)

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.
Note:	Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.
RefSeq:	NM_001902.6
RefSeq Size:	2140 bp
RefSeq ORF:	1218 bp
Locus ID:	1491
UniProt ID:	P32929
Cytogenetics:	1p31.1
Protein Pathways:	Cysteine and methionine metabolism, Glycine, serine and threonine metabolism, Metabolic pathways, Nitrogen metabolism, Selenoamino acid metabolism
MW:	44.5 kDa
Gene Summary:	This gene encodes a cytoplasmic enzyme in the trans-sulfuration pathway that converts cystathione derived from methionine into cysteine. Glutathione synthesis in the liver is dependent upon the availability of cysteine. Mutations in this gene cause cystathioninuria. Alternative splicing of this gene results in three transcript variants encoding different isoforms. [provided by RefSeq, Jun 2010]

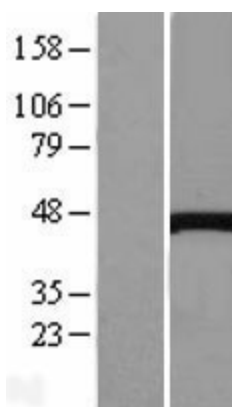
Product images:



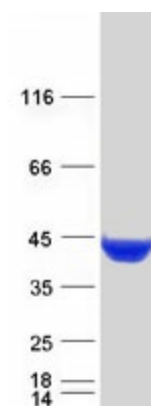
Circular map for RC202195



HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY CTH (Cat# RC202195, 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-CTH (Cat# [TA502442]). Positive lysates [LY419669] (100ug) and [LC419669] (20ug) can be purchased separately from OriGene.



Western blot validation of overexpression lysate (Cat# [LY419669]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC202195 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified CTH protein (Cat# [TP302195]). The protein was produced from HEK293T cells transfected with CTH cDNA clone (Cat# RC202195) using MegaTran 2.0 (Cat# [TT210002]).