

Product datasheet for **RC220398**

Liver Carboxylesterase 1 (CES1) (NM_001266) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Liver Carboxylesterase 1 (CES1) (NM_001266) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Liver Carboxylesterase 1
Synonyms:	ACAT; CE-1; CEH; CES2; hCE-1; HMSE; HMSE1; PCE-1; REH; SES1; TGH
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



[View online »](#)

ORF Nucleotide Sequence:

>RC220398 representing NM_001266
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGCATCGCC**

ATGTGGCTCCGTGCCTTTATCCTGGCCACTCTCTGCTTCCGCGCTTGGGGGCATCCGTCCTCGCCAC
 CTGTGGTGGACACCGTGCATGGCAAAGTCTGGGGAAGTTCGTCAGCTTAGAAGGATTTGCACAGCCTGT
 GGCCATTTTCTGGGAATCCCTTTTCCAAAGCCGCTCTTGGACCCTGAGGTTTACTCCACCGCAGCCT
 GCAGAACCATGGAGCTTTGTGAAGAATGCCACCTCGTACCCTCTATGTGCACCCAAGATCCCAAGGCGG
 GGCAGTACTCTCAGAGCTATTTACAAACCGAAAGGAGAACATTCCTCTCAAGCTTTCTGAAGACTGTCT
 TTACCTCAATATTTACACTCCTGCTGACTTGACCAAGAAAAACAGGCTGCCGGTGTGGTGTGGATCCAC
 GGAGGGGGCTGATGGTGGTGCGCATCAACCTATGATGGGCTGGCCCTTGCTGCCATGAAAACGTGG
 TGGTGGTACCATTCAATATCGCCTGGGCATCTGGGGATTCTTCAGCACAGGGGATGAACACAGCCGGG
 GAACTGGGGTCACTGGACCAGGTGGCTGCCCTGCGCTGGTCCAGGACAACATTGCCAGCTTTGGAGGG
 AACCCAGGCTCTGTGACCATCTTTGGAGAGTCAGCGGGAGGAGAAAGTGTCTCTGTTCTGTTTTGTCTC
 CATTGGCCAAGAACCTTCCACCGGGCCATTTCTGAGAGTGGCGTGGCCCTCACTTCTGTTCTGGTGAA
 GAAAGGTGATGTCAAGCCCTGGCTGAGCAAATTGCTATCACTGCTGGGTGCAAAACCACCACCTGCT
 GTCATGGTTCCTGCTGCGACAGAAGACGGAAGAGGAGCTCTGGAGACGACATTGAAAATGAAATTCT
 TATCTCTGGACTTACAGGGAGACCCAGAGAGAGTCAACCCCTCTGGGCACTGTGATTGATGGGATGCT
 GCTGCTGAAAACCTGAAGAGCTTCAAGCTGAAAGGAATTTCCACACTGTCCCTACATGGTCGGAATT
 AACAAAGCAGGAGTTTGGCTGGTGGTATCCAATGTTGATGAGCTATCCACTCTCCGAAGGGCACTGGACC
 AGAAGACAGCCATGCTACTCCTGTGGAAGTCTATCCCTTGTTCATTGCTAAGGAACGATTCCAGA
 AGCCACTGAGAAAATACTTAGGAGGAACAGACACTGTCAAAAAGAAAGACCTGTTCTGGACTTGATA
 GCAGATGTGATGTTTGGTGTCCCATCTGTGATTGTGGCCCGAACCACAGAGATGCTGGAGCACCCACCT
 ACATGTATGAGTTTCACTACCGTCCAAGCTTCTCATCAGACATGAAACCAAGACGGTGTAGGAGACCA
 CGGGGATGAGCTTCTCCGCTTTGGGCCCCATTTTTAAAAGAGGGTGCCTCAGAAGAGGAGATCAGA
 CTTAGCAAGATGGTGTGAAATTCTGGGCAACTTTGCTCGCAATGAAACCCCAATGGGGAAGGGTGC
 CCCACTGGCCAGAGTACAACCAGAAGGAAGGTATCTGCAGATTGGTCCCAACACCCAGGCGGCCAGAA
 GCTGAAGGACAAAGAAGTAGCTTTCTGGACCAACCTTTTCCAAGAAGGCAGTGGAGAAGCCACCCAG
 ACAGAACACATAGAGCTG

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RC220398 representing NM_001266
 Red=Cloning site Green=Tags(s)

MWLRAFILATLSASAAWGHPSSPPVDTVHGKVLGKFVSLGFAQPVAIFLGIPFAKPLGPLRFTPPQP
 AEPWSFVKNATSYPPMCTQDPKAGQLLSELFTRNKENIPLKLSLDCLYLNIYTPADLTKKNRPLPVMVWIH
 GGLMVGAASTYDGLALAAHENVVVVTIQYRLGIWGFSTGDEHSRGNWGHLDQVAALRWVQDNIAISFGG
 NPGSVTIFGESAGGESVSVLVLSPKAKNLFHRAISESGVALTSVLVKKGDVKPLAEQIAITAGCKTTTSA
 VMVHCLRQKTEEELLETTLMKFLSLDLQGDPRESQPLLGTVIDGMLLLKTPEELQAERNFHTVPYMGVI
 NKQEFGLIPMLMSYPLSEGQLDQKTAMSLWKSYPVLCIAKELIPEATEKYLGGTDDTVKKKDLFLDLI
 ADVMFGVPSVIVARNHRDAGAPTYMYEFQYRPSFSSDMKPKTVIGDHGDELFSVFGAPFLKEGASEEEIR
 LSKMVMKFWANFARNGNPNGEGLPHWPEYNQKEGYLQIGANTQAAQKLKDKKEVAFWTNLF AKKAVEKPPQ
 TEHIEL

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms:

https://cdn.origene.com/chromatograms/mk6099_d08.zip

Restriction Sites:

Sgfl-Mlul

Cloning Scheme:



ACCN: NM_001266

ORF Size: 1698 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:
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_001266.5](#)

RefSeq Size: 2021 bp

RefSeq ORF: 1701 bp

Locus ID: 1066

UniProt ID: [P23141](#)

Cytogenetics: 16q12.2

Domains: COesterase

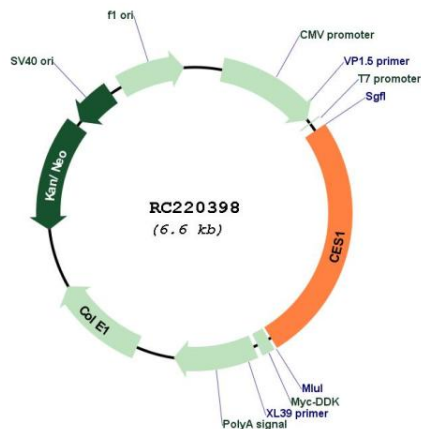
Protein Families: Druggable Genome

Protein Pathways: Drug metabolism - other enzymes

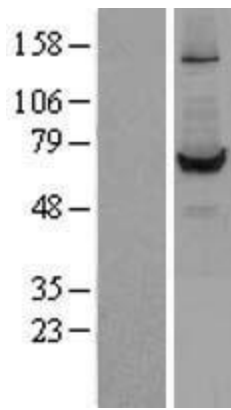
MW: 62.39 kDa

Gene Summary: This gene encodes a member of the carboxylesterase large family. The family members are responsible for the hydrolysis or transesterification of various xenobiotics, such as cocaine and heroin, and endogenous substrates with ester, thioester, or amide bonds. They may participate in fatty acyl and cholesterol ester metabolism, and may play a role in the blood-brain barrier system. This enzyme is the major liver enzyme and functions in liver drug clearance. Mutations of this gene cause carboxylesterase 1 deficiency. Three transcript variants encoding three different isoforms have been found for this gene. [provided by RefSeq, Jun 2010]

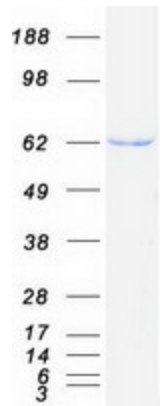
Product images:



Circular map for RC220398



Western blot validation of overexpression lysate (Cat# [LY400509]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC220398 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified CES1 protein (Cat# [TP320398]). The protein was produced from HEK293T cells transfected with CES1 cDNA clone (Cat# RC220398) using MegaTran 2.0 (Cat# [TT210002]).