

Product datasheet for **RC202081**

Liver Carboxylesterase 1 (CES1) (NM_001025194) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Liver Carboxylesterase 1 (CES1) (NM_001025194) 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)



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ORF Nucleotide Sequence:

>RC202081 ORF sequence
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGCATCGCC**

ATGTGGCTCCCTGCTCTTGTCTGCTGGCCACTCTCGTGTCTCCGCGCTTGGGGGCATCCGTCCTCGCCAC
 CTGTGGTGGACACCGTGCATGGCAAAGTCTGGGGAAGTTCGTCAGCTTAGAAGGATTTGCACAGCCTGT
 GGCCATTTTCTGGGAATCCCTTTTCCAAAGCCGCTCTTGGACCCCTGAGGTTTACTCCACCGCAGCCT
 GCAGAACCATGGAGCTTTGTGAAGAATGCCACCTCGTACCCTCTATGTGCACCCAAGATCCCAAGGCGG
 GGCAGTTACTCTCAGAGCTATTTACAAACCGAAAGGAGAACATTCCTCTCAAGCTTTCTGAAGACTGTCT
 TTACCTCAATATTTACACTCCTGCTGACTTGACCAAGAAAAACAGGCTGCCGGTGTGGTGTGGATCCAC
 GGAGGGGGGCTGATGGTGGTGGCGCATCAACCTATGATGGGCTGGCCCTTGCTGCCCATGAAAACGTGG
 TGGTGGTGAACATTCAATATCGCCTGGGCATCTGGGGATTCTTCAGCACAGGGGATGAACACAGCCGGG
 GAACTGGGGTCACTGGACCAGGTGGCTGCCCTGCGCTGGGTCCAGGACAACATTGCCAGCTTTGGAGGG
 AACCCAGGCTCTGTGACCATCTTTGGAGAGTCAAGCGGGAGGAGAAAGTGTCTCTGTTCTGTTTTGTCTC
 CATTGGCCAAGAATCTCTTCCACCGGGCCATTTCTGAGAGTGGCGTGGCCCTCACTTCTGTTCTGGTGAA
 GAAAGGTGATGTCAAGCCCTTGGCTGAGCAAATTGCTATCACTGCTGGGTGCAAAACCACCACCTGCT
 GTCATGGTTCCTGCTGCGACAGAAGACGGAAGAGGAGCTCTTGGAGACGACATTGAAAATGAAATTCT
 TATCTCTGGACTTACAGGGAGACCCAGAGAGAGTCAACCCCTTCTGGGCACTGTGATTGATGGGATGCT
 GCTGCTGAAAACCTGAAGAGCTTCAAGCTGAAAGGAATTTCCACACTGTCCCTACATGGTGGGAATT
 AACAGCAGGAGTTTGGCTGGTGGTATCCAATGTTGATGAGCTATCCACTCTCCGAAGGGCAACTGGACC
 AGAAGACAGCCATGCTACTCCTGTGGAAGTCTATCCCTTGTTCATTGCTAAGGAACCTGATTCCAGA
 AGCCACTGAGAAAATACTTAGGAGGAACAGACACTGTCAAAAAGAAAGACCTGTTCTGGACTTGATA
 GCAGATGTGATGTTTGGTGTCCCATCTGTGATTGTGGCCCGAACCACAGAGATGCTGGAGCACCCACCT
 ACATGTATGAGTTTCACTACCGTCCAAGCTTCTCATCAGACATGAAACCAAGACGGTGTAGGAGACCA
 CGGGGATGAGCTCTTCTCCGCTTTGGGGCCCCATTTTTAAAAGAGGGTGCCTCAGAAGAGGAGATCAGA
 CTTAGCAAGATGGTGTGAAATTCTGGGCAACTTTGCTCGCAATGAAACCCCAATGGGGAAGGGTGC
 CCCACTGGCCAGAGTACAACCAGAAGGAAGGTATCTGCAGATTGGTCCCAACACCCAGGCGGCCAGAA
 GCTGAAGGACAAAGAAGTAGCTTTCTGGACCAACCTCTTGGCAAGAAGGCAGTGGAGAAGCCACCCAG
 ACAGAACACATAGAGCTG

ACGCGTACGCGGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RC202081 protein sequence
 Red=Cloning site Green=Tags(s)

MWLPALVLAATLAASAAWGHPSSPPVDTVHGKVLGKVFVSLGFAQPVAIFLGIPFAKPLPLRFTPPQP
 AEPWSFVKNATSYPMPCTQDPKAGQLLSELFTRNKENIPLKLSLDCLYLNIYTPADLTKKNRPLVMVWIH
 GGGLMVGAASTYDGLALAAHENVVVVTIQYRLGIWGFSTGDEHSRGNWGHLDQVAALRWVQDNIA SFGG
 NPGSVTIFGESAGGESVSVLVL SPLAKNLFHRAISESGVALTSVLVKKGDVKPLAEQIAITAGCKTTTSA
 VMVHCLRQKTEEELLETTLMKFLSLDLQGDPRESQPLLGTVIDGM LLLKTPEELQAERNFHTVPYMGVI
 NKQEFGLIPMLMSYPLSEGQLDQKTAMSLWKSYP LVCIAKELIPEATEKYLGGTDDTVKKKDLFLDLI
 ADVMFGVPSVIVARNHRDAGAPTYMYEFQYRPSFS SDDMKPKTVIGDHGDELFSVFGAPFLKEGASEEEIR
 LSKMVMKFWANFARNGNPNGEGLPHWPEYNQKEGYL QIGANTQAAQKLKDKKEVAFWTNLF AKKAVEKPPQ
 TEHIEL

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms:

https://cdn.origene.com/chromatograms/mk6539_e08.zip

Restriction Sites:

Sgfl-Mlul

Cloning Scheme:


ACCN: NM_001025194

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.

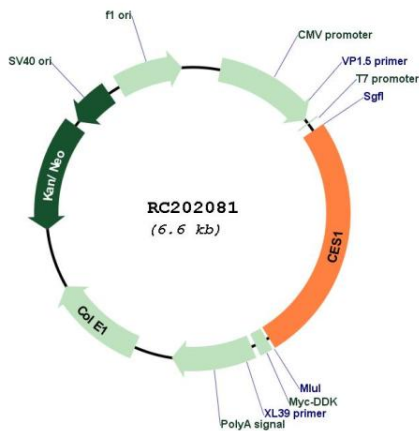
Components: The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

- 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.

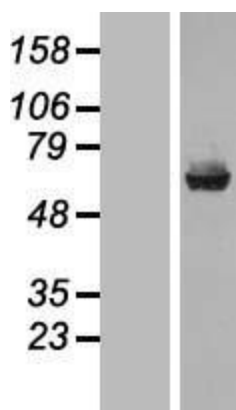
RefSeq: [NM_001025194.1](#), [NP_001020365.1](#)
RefSeq Size: 2024 bp
RefSeq ORF: 1704 bp
Locus ID: 1066
UniProt ID: [P23141](#)
Cytogenetics: 16q12.2
Protein Families: Druggable Genome
Protein Pathways: Drug metabolism - other enzymes
MW: 62.3 kDa

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]

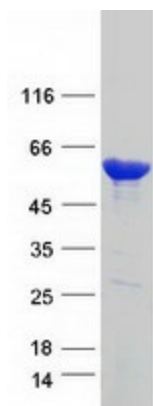
Product images:



Circular map for RC202081



Western blot validation of overexpression lysate (Cat# [LY422599]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC202081 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified CES1 protein (Cat# [TP302081]). The protein was produced from HEK293T cells transfected with CES1 cDNA clone (Cat# RC202081) using MegaTran 2.0 (Cat# [TT210002]).