

Product datasheet for **RG220398**

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:	TurboGFP
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-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide Sequence:

>RG220398 representing NM_001266
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**GCGATCGCC**

ATGTGGCTCCGTGCCTTTATCCTGGCCACTCTCTCTGCTTCCGCGCTTGGGGGCATCCGTCCTCGCCAC
 CTGTGGTGGACACCGTGCATGGCAAAGTCTGGGGAAGTTCGTCAGCTTAGAAGGATTTGCACAGCCTGT
 GGCCATTTTCTGGGAATCCCTTTTCCCAAGCCGCTCTTGGACCCCTGAGGTTTACTCCACCGCAGCCT
 GCAGAACCATGGAGCTTTGTGAAGAATGCCACCTCGTACCCTCTATGTGCACCCAAGATCCCAAGGCGG
 GGCAGTTACTCTCAGAGCTATTTACAAACCGAAAGGAGAACATTCCTCTCAAGCTTTCTGAAGACTGTCT
 TTACCTCAATATTTACACTCCTGCTGACTTGACCAAGAAAAACAGGCTGCCGGTGTGGTGTGGATCCAC
 GGAGGGGGGCTGATGGTGGTGCGGCATCAACCTATGATGGGCTGGCCCTTGCTGCCATGAAAACGTGG
 TGGTGGTGACCATTCAATATCGCCTGGGCATCTGGGGATTCTTCAGCACAGGGGATGAACACAGCCGGG
 GAACTGGGGTCACTGGACCAGGTGGCTGCCCTGCGCTGGTCCAGGACAACATTGCCAGCTTTGGAGGG
 AACCCAGGCTCTGTGACCATCTTTGGAGAGTCAAGCGGGAGGAGAAAGTGTCTCTGTTCTTGTCTTGTCTC
 CATTGGCCAAGAACCTTCTCCACCGGGCATTCTGAGAGTGGCGTGGCCCTCACTTCTGTTCTGGTGAA
 GAAAGGTGATGTCAAGCCCTTGGCTGAGCAAATTGCTATCACTGCTGGGTGCAAAACCACCACCTGCT
 GTCATGGTTCCTGCTGCGACAGAAGACGGAAGAGGAGCTCTTGGAGACGACATTGAAAATGAAATTCT
 TATCTCTGGACTTACAGGGAGACCCAGAGAGAGTCAACCCCTTCTGGGCACTGTGATTGATGGGATGCT
 GCTGCTGAAAACCTGAAGAGCTTCAAGCTGAAAGGAATTTCCACACTGTCCCCTACATGGTCGGAATT
 AACAGAAGACAGCCATGCTACTCTGTGAAGTCCCTATCCCCTGTTTGCATTGCTAAGGAAGTATTCC
 AGAAGCCACTGAGAAATACTTAGGAGGAACAGACGACACTGTCAAAAAGAAAGACCTGTTCTGGACTTG
 ATAGCAGATGTGATGTTTGGTGTCCCATCTGTGATTGTGGCCCGAACCCAGAGATGCTGGAGCAGCCCA
 CCTACATGTATGAGTTTCACTACCGTCCAAAGCTTCTCATCAGACATGAAACCCAAGACGGTGTAGGAGA
 CCACGGGGATGAGCTCTTCTCCGCTTTTGGGGCCCATTTTTAAAGAGGGTGCCTCAGAAGAGGAGATC
 AGACTTAGCAAGATGGTGTGAAATTCTGGCCAACTTTGCTCGCAATGGAAACCCCAATGGGGAAGGGC
 TGCCCCACTGGCCAGAGTACAACCAGAAGGAAGGGTATCTGCAGATTGGTCCAACACCCAGCGGCCCA
 GAAGCTGAAGGACAAAGAAGTAGCTTTCTGGACCAACCTTTGCCAAGAAGGCAGTGGAGAAGCCACCC
 CAGACAGAACACATAGAGCTG

ACGCGTACGCGGCCGCTCGAG – GFP Tag – GTTTAA

Protein Sequence:

>RG220398 representing NM_001266
 Red=Cloning site Green=Tags(s)

MWLRAFILATLSASAAWGHPSSPPVVDTVHGKVLGKFSLEGFAPVAIFLGIPIFAKPPPLPLRFTPPQP
 AEPWSFVKNATSYPPMCTQDPKAGQLLSELFNTRKENIPLKLSLCLYLNIYTPADLTKNRLPVMVWIH
 GGGLMVGAASYDGLALAAHENVVVTIQYRLGIWGFSTGDEHSRGNWGLDQVAALRWVQDNIAISFGG
 NPGSVTIFGESAGGESVSVLVLSPKLNLFHRAISESGVALTSVLVKKGDVKPLAEQIAITAGCKTTTSA
 VMVHCLRQKTEEELLETTLKMFLSLDLQDPRESQPLLGTVIDGMLLLKTPEELQAERNFHTVPYMGVI
 NKQEFGLIPMQLMSYPLSEGQLDQKTAMSLWVSYPLVCIKELIPEATEKYLGGTDDTVKKKDLFLDL
 IADVMFGVPSVIVARNHRDAGAPTYMYEFQYRPSFSSDMKPKTVIGDHGDELFSVFGAPFLKEGASEEEI
 RLSKVMKFWANFARNGNPNGEGLPHWPEYNQKEGYLQIGANTQAAQKLKKEVAFWTLNFAKKAKEKPP
 QTEHIEL

TRTRPLE – GFP Tag – V

Restriction Sites:

SgfI-MluI

Cloning Scheme:



ACCN: NM_001266

ORF Size: 1701 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.

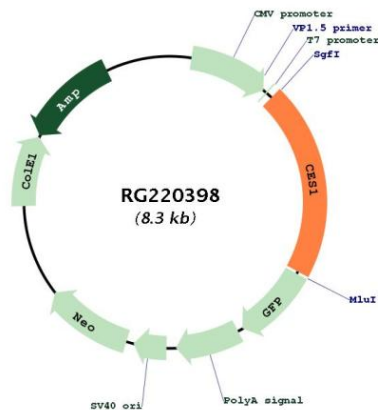
Components: The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

- 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_001266.4, NP_001257.4](#)
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
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 RG220398