

## Product datasheet for **SC302361**

### Liver Carboxylesterase 1 (CES1) (NM\_001025195) Human Untagged Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Liver Carboxylesterase 1 (CES1) (NM_001025195) Human Untagged Clone
Tag:	Tag Free
Symbol:	Liver Carboxylesterase 1
Synonyms:	ACAT; CE-1; CEH; CES2; hCE-1; HMSE; HMSE1; PCE-1; REH; SES1; TGH
Mammalian Cell Selection:	None
Vector:	<u><a href="#">pCMV6-XL4</a></u>
E. coli Selection:	Ampicillin (100 ug/mL)



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**Fully Sequenced ORF:** >OriGene sequence for NM\_001025195 edited  
 GTCGCCCTTCCACGATGTGGCTCCGTGCCTTTATCCTGGCCACTCTCTGCTTCCGCGG  
 CTTGGGCAGGGCATCCGTCCTCGCCACCTGTGGTGGACACCGTGCATGGCAAAGTGTGG  
 GGAAGTTCGTAGCTTAGAAGGATTTGCACAGCCTGTGGCCATTTTCTGGGAATCCCTT  
 TTGCCAAGCCGCTCTTGGACCCCTGAGGTTTACTCCACCGCAGCCTGCAGAACCATGGA  
 GCTTTGTGAAGAATGCCACCTCGTACCCTCCTATGTGCACCAAGATCCCAAGGCGGGG  
 AGTTACTCTCAGAGCTATTTACAACCCGAAAGGAGAACATTCTCTCAAGCTTTTCTGAAG  
 ACTGTCTTTACCTCAATATTTACACTCCTGCTGACTTGACCAAGAAAAACAGGCTGCCGG  
 TGATGGTGTGGATCCACGGAGGGGGCTGATGGTGGGTGCGGCATCAACCTATGATGGGC  
 TGGCCCTTGTGCCATGAAAACGTGGTGGTGGTACCATTCAATATCGCCTGGGCATCT  
 GGGGATTCTTACGACAGGGGATGAACACAGCCGGGGAACTGGGGTACCTGGACCAGG  
 TGGCTGCCCTGCGCTGGGTCCAGGACAACATTGCCAGCTTTGGAGGGAACCCAGGCTCTG  
 TGACCATCTTTGGAGAGTCAGCGGGAGGAGAAAGTGTCTCTGTTCTTGTTTTGTCTCCAT  
 TGGCCAAGAACCTCTTCCACCGGCCATTTCTGAGAGTGGCGTGGCCCTCACTTCTGTTC  
 TGGTGAAGAAAGGTGATGTCAAGCCCTTGGCTGAGCAAATGCTATCACTGCTGGGTGCA  
 AAACCACCACCTCTGCTGTCATGGTTCCTGCTGCGACAGAAGACGGAAGAGGAGCTCT  
 TGGAGACGACATTGAAAATGAAATTCTTATCTCTGGACTTACAGGGAGACCCAGAGAGA  
 GTCAACCCCTTCTGGGCACTGTGATTGATGGGATGCTGCTGCTGAAAACCTGAAGAGC  
 TTCAAGCTGAAAGGAATTTCCACTGTCCCCTACATGGTCGGAATTAACAAGCAGGAGT  
 TTGGCTGGTTGATTCCAATGCAGTTGATGAGCTATCCACTCTCCGAAGGGCAACTGGACC  
 AGAAGACAGCCATGTCACTCCTGTGGAAGTCTATCCCCTGTTTGCATTGCTAAGGAAC  
 TGATTCCAGAAGCCTGAGAAAATACTTAGGAGGAACAGACGACTGTCAAAAAGAAAG  
 ACCTGTTTCTGGACTTGATAGCAGATGTGATGTTTGGTGTCCCATCTGTGATTGTGGCCC  
 GGAACCACAGAGATGCTGGAGCACCCACCTACATGTATGAGTTTCAGTACCGTCCAAGCT  
 TCTCATCAGACATGAAACCCAAGACGGTATAGGAGACCACGGGATGAGCTCTTCTCCG  
 TCTTTGGGCCCCATTTTTAAAAGAGGGTGCCTCAGAAGAGGAGATCAGACTTAGCAAGA  
 TGGTGTGAAATTCTGGGCCAACTTTGCTCGCAATGGAACCCCAATGGGGAAGGGCTGC  
 CCCACTGGCCAGAGTACAACCAGAAGGAAGGTATCTGCAGATTGGTGCCAACACCCAGG  
 CGGCCCAGAAGCTGAAGGACAAAGAAGTAGCTTTCTGGACCAACCTCTTTGCCAAGAAGG  
 CAGTGGAGAAGCCACCCAGACAGAACACATAGAGCTGTGAATGAAGATCCAGCCGGCCT  
 TGGGAGCCTGGAGGAGCAAAGACTGGGGTCTTTTGCFAAAGGGATTGCAGTTTCAAGG  
 CATCTTACCATGGCTGGGGAATTGTCTGGTGGTGGGGGGCAGGGACAGAGGCCATGAAG  
 GAGCAAGTTTTGTATTTGTGACCTCAGCTTTGGGAATAAAGGATCTTTTGAAGGCCAAAA  
 AAAAAAAAAAAAAA

**Restriction Sites:** Please inquire  
**ACCN:** NM\_001025195  
**Insert Size:** 1900 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](mailto: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 TrueClone is provided through our Custom Cloning Process that includes sub-cloning into OriGene's pCMV6 vector and full sequencing to provide a non-variant match to the expected reference without frameshifts, and is delivered as lyophilized plasmid DNA.

**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\\_001025195.1](#), [NP\\_001020366.1](#)

**RefSeq Size:** 2027 bp

**RefSeq ORF:** 1707 bp

**Locus ID:** 1066

**UniProt ID:** [P23141](#)

**Cytogenetics:** 16q12.2

**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]

Transcript Variant: This variant (1) represents the longest transcript and encodes the longest isoform (a).