

Product datasheet for **SC316626**

Liver Carboxylesterase 1 (CES1) (NM_001266) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Liver Carboxylesterase 1 (CES1) (NM_001266) 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>pCMV6-XL4</u>
E. coli Selection:	Ampicillin (100 ug/mL)



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Fully Sequenced ORF:

>OriGene sequence for NM_001266 edited
 ACTGTGCGCCCTTCCACGATGTGGCTCCGTGCCTTTATCCTGGCCACTCTCTCTGCTTCCG
 CGGCTTGGGGGCATCCGTCTCGCCACCTGTGGTGGACACCGTGCATGGCAAAGTGCTGG
 GGAAGTTCGTAGCTTAGAAGGATTTGCACAGCCTGTGGCCATTTTCTGGGAATCCCTT
 TTGCCAAGCCGCTCTTGGACCCCTGAGGTTTACTCCACCGCAGCCTGCAGAACCATGGA
 GCTTTGTGAAGAATGCCACCTCGTACCCTCCTATGTGCACCAAGATCCCAAGGCGGGGC
 AGTTACTCTCAGAGCTATTTACAAACCGAAAGGAGAACATTCTCTCAAGCTTTTCTGAAG
 ACTGTCTTTACCTCAATATTTACACTCCTGCTGACTTGACCAAGAAAAACAGGCTGCCGG
 TGATGGTGTGGATCCACGGAGGGGGCTGATGGTGGGTGCGGCATCAACCTATGATGGGC
 TGGCCCTTGCTGCCCATGAAAACGTGGTGGTGGTACCATTCAATATCGCCTGGGCATCT
 GGGGATTCTTACGACAGGGGATGAACACAGCCGGGGAACTGGGGTACCTGGACCAGG
 TGGCTGCCCTGCGCTGGGTCCAGGACAACATTGCCAGCTTTGGAGGGAACCCAGGCTCTG
 TGACCATCTTTGGAGAGTCAGCGGGAGGAGAAAGTGTCTCTGTTCTTGTGTTTGTCTCCAT
 TGGCCAAGAACCTCTTCCACCGGCCATTTCTGAGAGTGGCGTGGCCCTCACTTCTGTTT
 TGGTGAAGAAAGGTGATGTCAAGCCCTTGGCTGAGCAAATGCTATCACTGCTGGGTGCA
 AAACCACCACCTCTGCTGTCATGGTTCCTGCTGCGACAGAAGACGGAAGAGGAGCTCT
 TGGAGACGACATTGAAAATGAAATTCTTATCTCTGGACTTACAGGGAGACCCAGAGAGA
 GTCAACCCCTTCTGGGCACTGTGATTGATGGGATGCTGCTGCTGAAAACCTGAAGAGC
 TTCAAGCTGAAAGGAATTTCCACACTGTCCCCTACATGGTCGGAATTAACAAGCAGGAGT
 TTGGCTGGTTGATTCCAATGCAGTTGATGAGCTATCCACTCTCCGAAAGGGCAACTGGACC
 AGAAGACAGCCATGTCACTCCTGTGGAAGTCTATCCCCTGTTTGCATTGCTAAGGAAC
 TGATTCCAGAAGCCTGAGAAAATACTTAGGAGAACAGACACTGTCAAAAAGAAAG
 ACCTGTTTCTGGACTTGATAGCAGATGTGATGTTGGTGTCCCATCTGTGATTGTGGCCC
 GGAACCACAGAGATGCTGGAGCACCCACCTACATGTATGAGTTTCAGTACCGTCCAAGCT
 TCTCATCAGACATGAAACCCAAGACGGTATAGGAGACCACGGGATGAGCTCTTCTCCG
 TCTTTGGGGCCCCATTTTTAAAAGAGGGTGCCTCAGAAGAGGAGATCAGACTTAGCAAGA
 TGGTGTGAAATCTGGGCCAATTTGCTCGCAATGGAACCCCAATGGGGAAGGGCTGC
 CCCACTGGCCAGAGTACAACCAGAAGGAAGGTATCTGCAGATTGGTCCCAACACCCAGG
 CGGCCCAGAAGCTGAAGGACAAAGAAGTAGCTTTCTGGACCAACCTCTTGGCCAAGAAGG
 CAGTGGAGAAGCCACCCAGACAGAACACATAGAGCTGTGAATGAAGATCCAGCCGGCT
 TGGGAGCCTGGAGGACAAAGACTGGGGTCTTTTGCAGAAAGGATTGCAGTTTCAAGG
 CATCTTACCATGGCTGGGGAATGTCTGGTGGTGGGGGACAGGGACAGAGGCCATGAAG
 GAGCAAGTTTTGTATTTGTGACCTCAGCTTTGGGAATAAAGGATCTTTTGAAGGCCAAAA
 AAAAAAAAAAAAAA

5' Read Nucleotide Sequence:

>OriGene 5' read for NM_001266 unedited
 NAAGAGCGCTGNCANATATTTGTATACGATTCACTATAGGCGCCGCGGAAACTGTCCG
 CCTTCCCAGATGTGGCTCCGTGCCTTTATCCTGGCCACTCTCTCTGCTTCCGCGGCTTGGG
 GGCATCCGTCCTCGCCACCTGTGGTGGACACCGTGCATGGCAAAGTGTGGGGAAGTTTCG
 TCAGCTTAGAAGGATTTGCACAGCCTGTGGCCATTTTCTGGGAATCCCTTTTGGCAAGC
 CGCCTCTTGGACCCCTGAGGTTTACTCCACCGCAGCCTGCAGAACCATGGAGCTTTGTGA
 AGAATGCCACCTCGTACCCTCCTATGTGCACCCAAGATCCCAAGGCGGGGAGTTACTCT
 CAGAGCTATTTACAAACCGAAAGGAGAACATTCTCTCAAGCTTTCTGAAGACTGTCTTT
 ACCTCAATATTTACTCTCTGCTGACTTGACCAAGAAAAACAGGCTGCCGGTGTGGTGT
 GGATCCACGGAGGGGGCTGATGGTGGGTGCGGCATCAACCTATGATGGGCTGGCCCTTG
 CTGCCCCATGAAAACGTGGTGGTGGTGGTACCATTCATATCGCCTGGGCATCTGGGGATTCT
 TCAGCACAGGGGATGAACACAGCCGGGGAACTGGGGTCACTGGACCAGGTGGCTGCC
 TGCGCTGGGTCCAGGACAACATTGCCAGCTTTGGAGGGAACCCAGGCTCTGTGACCATCT
 TTGGAGAGTCAGCGGGAGGAGAAAGTGNCTCTGTTCTTGTGTTTGNCTCCATTGGCCAAGA
 ACCTCTTCCACCGGCCATTTCTGAGAGTGGCGTGGCCCTCACTTCTGNTCTGGTGAAGA
 AAGGTGATGTCAAAGCCTTGGGCTGAGCAATGCTAC

3' Read Nucleotide Sequence:	>Forward primer walk for NM_001266 unedited GTCTGCCTGCGAGAGAGGAAGAGGAGCTCTCTGGAGACGACATTGAAAATGAAATTCTTA TCTCTGGACTTACAGGGAGACCCAGAGAGAGTCAACCCCTTCTGGGCACTGTGATTGAT GGGATGCTGCTGCTGAAAACACCTGAAGAGCTTCAAGCTGAAAGGAATTTCCACACTGTC CCCTACATGGTCGGAATTAACAAGCAGGAGTTTGGCTGGTTGATTCCAATGCAGTTGATG AGCTATCCACTCTCCGAAGGGCAACTGGACCAGAAGACAGCCATGTCCTCTGTGGAAG TCCTATCCCCTTGTGTTGCATTGCTAAGGAACTGATTCCAGAAGCCACTGAGAAATACTTA GGAGGAACAGACGACACTGTCAAAAAGAAAGACCTGTTCTGACTTGATAGCAGATGTG ATGTTTGGTGTCCATCTGTGATTGTGGCCCGAACCACAGAGATGCTGGAGCACCCACC TACATGTATGAGTTTCAGTACCGTCCAAGCTTCTCATCAGACATGAAACCCAAGACGGTG ATAGGAGACCACGGGATGAGCTCTTCTCCGTCTTTGGGCCCCATTTTTAAAAGAGGGT GCCTCAGAAGAGGAGATCAGACTTAGCAAGATGGTGTGAAATTTCTGGGCCAACTTTGCT CGCAATGGAACCCCAATGGGGAAGGGCTGCCCACTGGCCAGAGTACAACCAGAAAGAA AGGGTATCTGCAGATTGGTGCCAAACCCAGGCGGCCAGAAAGCTGAAGACAAAGAAGTA GCTTTCTGGACCAACCTCTTTGCCAAGAAGCAGTGGAGAAGCCACCCCCAGACAGACACA TAGAGCTGTGAATGAGATCCAGCCCGCCTGGGAGCCTGAGAGCAAAGACTGGGGTCTTT GCGAAAGGATTGCAGTCAGATCTACATGCTGGGATTGTCTGTGGTGGGGGCAGGGA AAGAGCCCATGAGGAGCAAGT
Restriction Sites:	NotI-NotI
ACCN:	NM_001266
Insert Size:	2000 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:	The open reading frame of this TrueClone was fully sequenced and found to have a single amino acid difference from the protein associated to this reference.
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.

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:	<p>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]</p> <p>Transcript Variant: This variant (3) uses a different in-frame splice site at the end of two separate exons compared to variant 1. The resulting isoform (c) has the same N- and C-termini but is shorter by 2 aa compared to isoform a.</p>