

## Product datasheet for **SC119956**

### **PLOD1 (NM\_000302) Human Untagged Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	PLOD1 (NM_000302) Human Untagged Clone
Tag:	Tag Free
Symbol:	PLOD1
Synonyms:	EDS6; EDSKCL1; LH; LH1; LLH; PLOD
Mammalian Cell Selection:	None
Vector:	<u><a href="#">pCMV6-XL5</a></u>
E. coli Selection:	Ampicillin (100 ug/mL)



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**Fully Sequenced ORF:**

```
>OriGene ORF sequence for NM_000302 edited
ATGCGGCCCTGCTGCTACTGGCCCTGCTGGGCTGGCTGCTGCTGGCCGAAGCGAAGGGC
GACGCCAAGCCGGAGGACAACCTTTTAGTCCTCACGGTGGCCACTAAGGAGACCGAGGGA
TTCCGTCGCTTCAAGCGCTCAGCTCAGTTCTTCAACTACAAGATCCAGGCGCTTGGCCTA
GGGAGGACTGGAATGTGGAGAAGGGGACGTCGGCAGGTGGAGGGCAGAAGGTCCGGCTG
CTGAAGAAAGCTCTGGAGAAGCACGCAGACAAGGAGGATCTGGTCATTCTCTTCGCAGAC
AGGAGCCAGGTGGTCTTCTCTGCTGAGGAGCTCATCTACCCAGACCGCAGGCTGGAGACC
AAGTATCCGGTGGTGTCCGATGGCAAGAGGTTCCCTGGGCTCTGGAGGCTTCATCGTTAT
GCCCCAACCTCAGCAAACCTGGTGGCCGAGTGGGAGGGCCAGGACAGCGACAGCGATCAG
CTGTTTTACACCAAGATCTTCTTGACCCGGAGAAGAGGGAGCAGATCAATATCACCCCTG
GACCACCCTGCCGATCTTCCAGAACCTGGATGGAGCCTTGGATGAGGTCGTGCTCAAG
TTTGAAATGGCCATGTGAGAGCGAGGAACCTGGCCTATGACACCCTCCCGGCTCTGATC
CATGGCAACGGGCAACCAAGCTGCAGTTGAACTACCTGGCAACTACATCCCGCGCTTC
TGGACCTTCGAAACAGGCTGCACCGTGTGTGACGAAGGCTTGGCGAGCCTCAAGGGCATT
GGGGATGAAGCTCTGCCACGGTCTGGTGGGCTGTTTATCGAACAGCCACGCGCTTT
GTGTCCCTGTTCTTCCAGCGGCTCCTGCGGCTCCACTACCCCCAGAAACATGCGACTT
TTCATCCACAACCACGAGCAGCACCACAAGGCTCAGGTGGAAGAGTTCTTGGCACAGCAT
GGCAGCGAGTACCAGTCTGTGAAGCTGGTGGGCCCTGAGGTGCGGATGGCGAATGCAGAT
GCCAGGAACATGGGCGCAGACCTGTGCCGGCAGGACCGCAGCTGCACCTACTACTTCAGC
GTGGATGCTGACGTGGCCCTGACCGAGCCCAACAGCCTGCGGCTGCTGATCCAACAGAAC
AAGAACGTCATTGCCCGCTGATGACCCGGCATGGGAGGCTGTGGTCAACTTCTGGGGG
GCTCTCAGTGCAGATGGCTACTATGCCGTTCCGAGGACTACGTGGACATTGTGCAGGGG
CGGCGTGTGGTGTGGAATGTGCCCTATATTTCAAACATCTACTTGATCAAGGGCAGT
GCCCTGCGGGGTGAGCTGCAGTCTCAGATCTTCCACCACAGCAAGCTGGACCCCGAC
ATGGCCTTCTGTGCCAACATCCGGCAGCAGGATGTGTTTATGTTCTGACCAACCGGCAC
ACCCTTGGCCATCTGCTCTCCCTAGACAGCTACCGCACCACCCACCTGCACAACGACCTC
TGGGAGGTGTTCCAGCAACCCCGAGGACTGGAAGGAGAAGTACATCCACCAGAACTACACC
AAAGCCCTGGCAGGGAAGCTGGTGGAGACGCCCTGCCCGATGTCTATTGGTTCCCCATC
TTCACGGAGGTGGCCTGTGATGAGCTGGTGGAGGAGATGGAGCACTTTGGCCAGTGGTCT
CTGGGCAACAACAAGGACAACCGCATCCAGGGTGGCTACGAGAAGTGGCCACTATTGAC
ATCCACATGAACCAGATCGGCTTTGAGCGGGAGTGGCACAAATTCCTGCTGGAGTACATT
GCGCCCATGACGGAGAAGCTCTACCCCGGCTACTACACCAGGGCCAGTTTGACCTGGCC
TTTGTGCTCCGCTACAAGCCTGATGAGCAGCCCTCACTGATGCCACACCATGATGCCTCC
ACCTTCACCATCAACATCGCCCTGAACCGAGTCGGGGTGGATTACGAGGGCGGGGCTGT
CGGTTCTGCGCTACAACGTCCATCCGAGCCCCAAGGAAGGGCTGGACCCTCATGCAC
CCTGGACGACTCACGATTACCATGAGGGGCTCCCCACCACCAGGGGCACCCGCTACATC
GCAGTCTCCTTCGTCGATCCCTAA
```

**5' Read Nucleotide Sequence:**

>OriGene 5' read for NM\_000302 unedited  
 NGGTGTCAAATGTATACGACTCACTATAGGCGGCCGGAATTCGCACGAGGCGGGAC  
 CTGCGGCCCGNTCGCGAGTTTCCAGCCCTGCGAGCGCCCGGGTGGCCGATCGTCCC  
 CCATACCTCGGCCATGCGGCCCTGCTGCTACTGGCCCTGCTGGGCTGGCTGCTGCTGGC  
 CGAAGCGAAGGGCGACGCCAAGCCGGAGGACAACCTTTTAGTCTCACGGTGGCCACTAA  
 GGAGACCGAGGGATTCCGTGCTTCAAGCGCTCAGCTCAGTTCTTCAACTACAAGATCCA  
 GGCGCTTGGCCTAGGGGAGGACTGGAATGTGGAGAAGGGGACGTCGGCAGGTGGAGGGCA  
 GAAGGTCCGGCTGCTGAAGAAAGCTCTGGAGAAGCACGCAGACAAGGAGGATCTGGTCAT  
 TCTCTTCGCAGACAGCTATGACGTGCTGTTTGCATCGGGGCCCGGGAGCTCCTGAAGAA  
 GTTCCGGCAGGCCAGGAGCCAGGTGGTCTTCTGCTGAGGAGCTCATCTACCCAGACCG  
 CAGGCTGGAGACCAAGTATCCGGTGGTGTCCGATGGCAAGAGGTTCTGGGCTCTGGAGG  
 CTTTCATCGGTTATGCCCCCAACCTCAGCAAAGTGGTGGCCGAGTGGGAGGGCCAGGACAG  
 CGACAGCGATCAGCTGTTTTACACCAAGATCTTCTTGGACCCGGAGAAGAAGGAGCAGAT  
 CAATATCACCTGGACCACCGCTGCCGTATCTTCCAGACCTGGATGGAGCCTTGGATGAA  
 GTCGTGCTCAAGTTTGAATGGCCATGTGAGAGCGAAGAAGCTGGCCTATGACACCCTCC  
 CCGTCCTGATCCATGGCAAACGGGCCACCAAGCTGCAGTTGAACCTACCTGGNGCACTACA  
 TNCCG

**3' Read Nucleotide Sequence:**

>OriGene 3' read for NM\_000302 unedited  
 CTTTATAGAACTCCTCGTTTCTGACGGTCTGTCCCTCTCTTCANAGCATCCAGGACAGGG  
 TGACCCAGTGTGGTGTGTGGACCTGCTACTCCCCTCCCCACAGGCAAGTAGAAGATCGAG  
 CTGTGCACAGATGCCTCTTCTGTCTCCCAAGAGGTTCTCTGGAGTCGCTGTCTCCAGGGG  
 ACTACGGTTTGTCTCATGACCAGCCATGGAGGCAAGAAGTCCCAGACTCAGGGCAGCCCT  
 TGGAGTCTGATCCAGGTGTCTTTACCCAAAACCTTGAAGCAGAAGTCCCTGGTGCAACAC  
 CTGTGCCTGGGAGAAGCTCTGGCCATGGCTTCTACCCAGACAGTCTTTCTGGGCAACTT  
 GGGGAAGCCCCTGTTCTGCTCAAGTCTCACCCATGGAAGAGGTGGGGGAAGGGGCCTT  
 GGTTTTTTCAGGAAGACAGGTTGGAGAGCACGAGTCACTACAAAGCAGTAAAAGTGAATGG  
 TGTCTCCAGGGGCTGGGTCCAGAACACCACGGAGAGCCCCAGCCATAAAGGTGTGTTCCG  
 CCTCTGGCCTGCAGGAATCTCTTTGAATCTCNTGATTGGTGGCTCCAAGAGCAATGGGA  
 AGTCAACAGCCCCAGAGGCTGGACTGNGTTCCTGGGACCCCCAGTCCCANNAGCTGCTG  
 GGCAGTGGTTGTGGCAAGAAAGAAAGGTTCCAGAGGGTCAAGCCTGCCCAATANGGATC  
 GACGAAGGAGACTGCGATGTACCGGGTGCCTGTTGGTGGGAGCCCTCATGGTATGC  
 GTGAGTCGTCCAGGGTGCATGAGGGTTCACCCCTTNCCTTGGGGCTCGAATGGACCAGTTG  
 TACGCANGACCCGACAGNCCCCGCCTCGTNATCCACCCGACTGCGTCAGGGCCATTGTGA  
 TGGTGAAGGCTGAGGCCTCATGGTGTGGCACTCATGAAGCCTGCTATCAAGTCTGATACG  
 AACACAAGGCAGGTCAACTGGGCCCTGTGTATTACCGGGTAAAGCTTCCCTCATGGCCAT

**Restriction Sites:**

NotI-NotI

**ACCN:**

NM\_000302

**Insert Size:**

3180 bp

**OTI Disclaimer:**

Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).

**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\\_000302.2](#), [NP\\_000293.2](#)

**RefSeq Size:** 3004 bp

**RefSeq ORF:** 2184 bp

**Locus ID:** 5351

**UniProt ID:** [Q02809](#)

**Cytogenetics:** 1p36.22

**Domains:** 2OG-Fell\_Oxy, P4Hc

**Protein Families:** Druggable Genome

**Protein Pathways:** Lysine degradation

**Gene Summary:** Lysyl hydroxylase is a membrane-bound homodimeric protein localized to the cisternae of the endoplasmic reticulum. The enzyme (cofactors iron and ascorbate) catalyzes the hydroxylation of lysyl residues in collagen-like peptides. The resultant hydroxylysyl groups are attachment sites for carbohydrates in collagen and thus are critical for the stability of intermolecular crosslinks. Some patients with Ehlers-Danlos syndrome type VI have deficiencies in lysyl hydroxylase activity. Two transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Oct 2015]  
Transcript Variant: This variant (2) lacks an alternate in-frame exon in the 5' coding region compared to variant 1. The resulting isoform (2) has the same N- and C-termini but is shorter compared to isoform 1.