

## Product datasheet for **SC126858**

### Laminin beta 1 (LAMB1) (NM\_002291) Human Untagged Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Laminin beta 1 (LAMB1) (NM_002291) Human Untagged Clone
Tag:	Tag Free
Symbol:	Laminin beta 1
Synonyms:	CLM; LIS5
Mammalian Cell Selection:	None
Vector:	<u>pCMV6-XL4</u>
E. coli Selection:	Ampicillin (100 ug/mL)
Fully Sequenced ORF:	>NCBI ORF sequence for NM_002291, the custom clone sequence may differ by one or more nucleotides

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ATGGGGCTTCTCCAGTTGCTAGCTTTCAGTTTCTTAGCCCTGTGCAGAGCCCGAGTGC GCGCTCAGGAAC
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CAAAGATACTTAGAAGATAAAGCTCAAGAATTAGCAAGACTGGAAGGAGAAGTCCGTTCACTCCTAAAGG  
ATATAAGCCAGAAAGTTGCTGTGTATAGCACATGCTTGTAA

**5' Read Nucleotide Sequence:**

>OriGene 5' read for NM\_002291 unedited  
GAATTCGGCACCAGGCGAGAGCTCGCGTCGCCGAAAGGAAGACGGGAAGAAAGGGCAGG  
CGGCTCGGCGGGCGTCTTCTCCACTCCTCTGCCGCTCCCGTGGCTGCAGGGAGCCGGC  
ATGGGGCTTCTCCAGTTGCTAGCTTTCAGTTTCTTAGCCCTGTGCAGAGCCCGAGTGCGC  
GCTCAGGAACCCGAGTTCAGCTACGGCTGCGCAGAAGGCAGCTGCATCCCGCCACGGGC  
GACCTTTCATCGGCCGAGCACAGAAGCTTTCGGTGACCTCGACGTGCGGGCTGCACAAG  
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TCCCAAGATCCTTATCATGAGACCCTGAATCCTGACAGCCATCTCATTGAAAATGTGGTC  
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GTAACATCCAAGTGGATTTGGAAGCAGAATTCATTTTACTCATCTCATAATGACTTTC  
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GGTGTGTATAGATACTTCGCTATGACTGTGAGGCCTCGTTTCCAGGCATTTCAACTGGC  
CCCATGAAAAAGTCGATGACATAATTTGTGATTCTCGATATTCTGACATTGAACCCCTC  
ACTGAAGGAGAGGTGATATTTCTGCTTTAGATCCTGCTTTCN

**3' Read Nucleotide Sequence:**

>OriGene 3' read for NM\_002291 unedited  
CTAGGATCGAGTTTTTTTTTTTTTTTTATATACAAAAGCACTGTACTTTATTTAACTC  
CATACAAAATGTGATTAACAAACATTAAATAGGTGATGTTTTATTTGAAGAGCATTAAAGT  
CAGTTTTTAAATGTAGTTGTTTTACCTTGGTACCTCAGCCATTTTTATTCTCCTCTG  
TTACAAGCATGTGCTATACACAGCAACTTCTGGCTTATATCCTTTAGGAGTGAACGGAC  
TTCTCCTCCAGTCTTGCTAATTCTTGAGCTTTATCTTCTAAGTATCTTTGATTGTCTTC  
ATATTTCTTTCTAAATCTTTGAGCAGTTGCAGCTTGCTATTTGCTTGAGCTAAAAGAGT  
TTTTGCTTCATTTGTAGCATTTCCGCTTTCCTTCTGGCATCAGCTGACTCTTCAGTTTT  
TTTGGCAATTAATTTTCTACTTTTTTATACTTTTCATCAAGTTCACCATCTAAAGTCTT  
CTTAACATCTTCTGCATTTGCTTCACAGTATATACTACTTTTTCAATATATTCTGCCTC  
CCGGAGTTTTGGGCAGCTTTCGCTTAAGTTCTTCCACATTCCTCTCTAACTCGCTGAT  
GCGCTGGGACGCGTTGAACAAAGTTTCTCAGAAGCTGCTGGTTCAGACTCAATCGAAGT  
TAACAGTTTCTGGGTTCTTGAAGTCTTCATCTGCTTGTAAATTGCCTTCTCTGCTGC  
GACCTGGGCTTTTCTGCTTCTTCCAGAGCTTCTTTTACATATCTGGCGTGAACCTAAC  
ATCTGGTGCACTTTTCTGCTCTTTTAGCTTCTGCTAACCACTG

**Restriction Sites:**

NotI-NotI

**ACCN:**

NM\_002291

**Insert Size:**

5500 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](#)

<b>Components:</b>	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).
<b>Reconstitution Method:</b>	<ol style="list-style-type: none"><li>1. Centrifuge at 5,000xg for 5min.</li><li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li><li>3. Close the tube and incubate for 10 minutes at room temperature.</li><li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li><li>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.</li></ol>
<b>RefSeq:</b>	<a href="#">NM_002291.1</a> , <a href="#">NP_002282.1</a>
<b>RefSeq Size:</b>	5866 bp
<b>RefSeq ORF:</b>	5361 bp
<b>Locus ID:</b>	3912
<b>UniProt ID:</b>	<a href="#">P07942</a>
<b>Cytogenetics:</b>	7q31.1
<b>Domains:</b>	EGF_Lam, laminin_Nterm
<b>Protein Families:</b>	Druggable Genome, Secreted Protein
<b>Protein Pathways:</b>	ECM-receptor interaction, Focal adhesion, Pathways in cancer, Small cell lung cancer

**Gene Summary:**

Laminins, a family of extracellular matrix glycoproteins, are the major noncollagenous constituent of basement membranes. They have been implicated in a wide variety of biological processes including cell adhesion, differentiation, migration, signaling, neurite outgrowth and metastasis. Laminins are composed of 3 non identical chains: laminin alpha, beta and gamma (formerly A, B1, and B2, respectively) and they form a cruciform structure consisting of 3 short arms, each formed by a different chain, and a long arm composed of all 3 chains. Each laminin chain is a multidomain protein encoded by a distinct gene. Several isoforms of each chain have been described. Different alpha, beta and gamma chain isomers combine to give rise to different heterotrimeric laminin isoforms which are designated by Arabic numerals in the order of their discovery, i.e. alpha1beta1gamma1 heterotrimer is laminin 1. The biological functions of the different chains and trimer molecules are largely unknown, but some of the chains have been shown to differ with respect to their tissue distribution, presumably reflecting diverse functions in vivo. This gene encodes the beta chain isoform laminin, beta 1. The beta 1 chain has 7 structurally distinct domains which it shares with other beta chain isomers. The C-terminal helical region containing domains I and II are separated by domain alpha, domains III and V contain several EGF-like repeats, and domains IV and VI have a globular conformation. Laminin, beta 1 is expressed in most tissues that produce basement membranes, and is one of the 3 chains constituting laminin 1, the first laminin isolated from Engelbreth-Holm-Swarm (EHS) tumor. A sequence in the beta 1 chain that is involved in cell attachment, chemotaxis, and binding to the laminin receptor was identified and shown to have the capacity to inhibit metastasis. [provided by RefSeq, Aug 2011]