

## Product datasheet for **SC317175**

### Laminin alpha 4 (LAMA4) (NM\_001105207) Human Untagged Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Laminin alpha 4 (LAMA4) (NM_001105207) Human Untagged Clone
Tag:	Tag Free
Symbol:	LAMA4
Synonyms:	CMD1Jj; LAMA3; LAMA4*-1
Vector:	<u>pCMV6 series</u>
Fully Sequenced ORF:	>NCBI ORF sequence for NM_001105207, the custom clone sequence may differ by one or more nucleotides

```

ATGGCTTTGAGCTCAGCCTGGCGCTCGGTTCTGCCTCTGTGGCTCCTCTGGAGCGCTGCC
TGCTCCCGCGCCGCTCCGGGGACGACAACGCTTTTCTTTTACATTGAAGGGAGCTCA
GCGGTTGGCAGGCAAGACCCGCTGAGACGAGCGAACCCCGCTGGCTCTGGGACGCTG
CCGCTGCGGCCGAGAAATGCAATGCTGGATTCTTTACACCCTGTGGGAGAATGTGTG
CCCTGCGACTGTAATGGCAATCCAACGAGTGTTGGACGGCTCAGGATACTGTGTGCAC
TGCCAGCGGAACACAACAGGAGAGCACTGTGAAAAGTGTCTGGATGGTTATATCGGAGAT
TCCATCAGGGGAGCACCCCAATTCTGCCAGCCGTGCCCTGTCCCCTGCCCACTTGGCC
AATTTTGCAGAATCCTGTCTATAGGAAAAATGGAGCTGTTTCGGTGCATTTGTAACGAAAAAT
TATGCTGGACCTAACTGTGAAAGATGTGCTCCCGTTACTATGGAACCCCTTACTCATT
GGAAGCACCTGTAAAGAAATGTGACTGCAGTGGAATTCAGATCCCAACCTGATCTTTGAA
GATTGTGATGAAGTCACTGGCCAGTGTAGGAATTGCTTACGCAACACCACCGGATCAAG
TGTGAACGTTGCGCTCCTGGCTACTATGGGGACGCCAGGATAGCCAAGAAGTGTGCAAGT
TGCAACTGCGGGGAGGCCCATGTGACAGTGTAAACGGAGAATGCTTGAAGAAGTTTT
GAACCCCTACAGGCTGTGATAAGTGCCTCTGGACCTGACTGATGCACTGCGGTTAGCA
GCCTCTCCATCGAGGAAGGCAAAATCCGGGGTGTGAGCGTATCCTCTGGGGCCGCGCT
CATAGGCACGTGAATGAAATCAACGCCACCATCTACCTCCTAAAAACAAAATTGTGAGAA
AGAGAAAACCAATACGCCCTAAGAAAGATACAAATCAACAATGCTGAGAACACGATGAAA
AGCCTTGTCTGACGTAGAGGAATTAGTTGAAAAGGAAAATCAAGCCTCCAGAAAAGGA
CAACTTGTTCAGAAGGAAAGCATGGACACCATTAAACACGCAAGTCACTGGTAGAGCAA
GCCCATGATATGAGGGATAAAATCCAAGAGATCAACAACAAGATGCTCTATTATGGGGAA
GAGCATGAACTTAGCCCCAAGGAAATCTCTGAGAAGCTGGTGTGGCCAGAAAGATGCTT
GAAGAGATTAGAAGCCGTCACCATTTTTACCCAACGGGAGCTCGTGGATGAGGAGGCA
GATGAGGCTTACGAACTACTGAGCCAGGCTGAGAGCTGGCAGCGGCTGCACAATGAGACC
CGCACTCTGTTTCTGTGCTCCTGGAGCAGCTGGATGACTACAATGCTAAGTTGTAGAT
CTCCAGGAAGCACTTGACCAGGCCCTTAACTATGTGAGGATGCCGAAGACATGAACAGG
GCCACAGCAGCCAGGACGGGACCATGAGAAACAACAGGAAAGAGTGAGGGAACAAATG
GAAGTGGTGAACATGTCTCTGAGCACATCTGCGGACTCTCTGACAACACCTCGTCTAACT
CTTTCAGAACTTGATGATATAATAAAGAATGCGTCAGGGATTTATGCAGAAATAGATGGA
GCCAAAAGTGAACATAAGTAAAATCTAACCTAAGTAACCTCAGCCATGATTTAGTC

```



[View online »](#)

CAAGAAGCTATTGACCATGCACAGGACCTTCAACAAGAAGCTAATGAATTGAGCAGGAAG  
 TTGCACAGTTCAGATATGAACGGGCTGGTACAGAAGGCTTTGGATGCATCAAATGTCTAT  
 GAAAATATTGTTAATTATGTTAGTGAAGCCAATGAAACAGCAGAAATTTGCTTTGAACACC  
 ACTGACCGAATTTATGATGCGGTGAGTGGGATTGATACTCAAATCATTACCATAAAGAT  
 GAAAGTGAGAACCTCCTCAATCAAGCCAGAGAAGTGAAGCAAAGGCAGAGTCTAGCAGT  
 GATGAAGCAGTGGCTGACACTAGCAGGCGTGTGGTGGAGCCCTAGCAAGGAAAAGTGGC  
 CTTAAAACAGACTCAGTGTGCGTTAAGCAACTACAAGCAGCAGAGAGAGGGGATGCC  
 CAGCAGCGCCTGGGGCAGTCTAGACTGATCACCGAGGAAGCCAACAGGACGACGATGGAG  
 GTGCAGCAGGCCACTGCCCCATGGCCAACAATCTAACCAACTGGTCACAGAATCTTCAA  
 CTTTTGACTCTTCTGCTTACAACACTGCAGTGAAGTCTGCTAGGGATGCAGTAAGAAAT  
 CTGACCGAGGTTGTCCCTCAGCTCCTGGATCAGCTTCGTACGGTTGAGCAGAAGCGACCT  
 GCAAGCAACGTTTCTGCCAGCATCCAGAGGATCCGAGAGCTCATTGCTCAGACCAGAAGT  
 GTTGCCAGCAAGATCCAAGTCTCCATGATGTTTGGTGGCCAGTCACTGTGGAAGTGAC  
 TCGAGAACCAGTATGGATGACTTAAAGGCCTTCACGTCTCTGAGCCTGTACATGAAACCC  
 CCTGTGAAGCGGCCGGAAGTACTGACCGAGACTGCAGATCAGTTTATCCTGTACCTCGGAAGC  
 AAAACCGCCAAAAAAGAGTATATGGGTCTTGAATCAAAAATGATAATCTGGTATACGTC  
 TATAATTTGGGAACTAAAGATGTGGAGATTCCTGGACTCCAAGCCCGTCAGTTCCTGG  
 CCTGCTTACTTACGATTGTCAAGATTGAAAGGGTGGGAAAACATGGAAGGTGTTTTTA  
 ACAGTCCCAGTCTAAGTAGCACAGCAGAGGAAAAGTTCATTAAGGGGGAAATTTTCG  
 GGAGATGACTCTCTGCTGGACCTGGACCCTGAGGACACAGTGTTTTATGTTGGTGGAGTG  
 CCTTCAAACCTTCAAGTCCCTACCAGCTTAAACCTGCCTGGCTTTGTTGGCTGCCTGGAA  
 CTGGCCACTTTGAATAATGATGTGATCAGCTTGTACAACCTTAAGCACATCTATAATATG  
 GACCCCTCCACATCAGTCCACTGTGCCGAGATAAGCTGGCCTTCACTCAGAGTCGGGCT  
 GCCAGTTACTTCTCGATGGCTCCGGTTATGCCGTGGTGAGAGACATCACAAAGGAGGG  
 AAATTTGGTCAGGTGACTCGCTTGGACATAGAAGTTGCAACACCAGCTGACAACGGCCTT  
 ATTCTCTGATGGTCAATGGAAGTATGTTTTTCAGACTGGAAATGCGCAATGGTTACCTA  
 CATGTGTTCTATGATTTTGGATTGAGCGGTGGCCCTGTGCATCTTGAAGATACGTTAAAG  
 AAAGCTCAAATTAATGATGCAAAATACCATGAGATCTCAATCATTACCACAATGATAAG  
 AAAATGATCTTGGTAGTTGACAGAAGGCATGTCAAGAGCATGGATAATGAAAAGATGAAA  
 ATACCTTTTACAGATATACATTGGAGGAGCTCCTCCAGAAATCTTACAATCCAGGGCC  
 CTCAGAGCACACCTTCCCTAGATATCAACTTCAGAGGATGCATGAAGGGCTTCCAGTTC  
 CAAAAGAAGGACTTCAATTTACTGGAGCAGACAGAAACCCTGGGAGTTGGTTATGGATGC  
 CCAGAAGACTCACTTATATCTCGCAGAGCATATTTCAATGGACAGAGCTTCATTGCTTCA  
 ATTCAGAAAATATCTTTCTTTGATGGCTTTGAAGGAGGTTTTAATTTCCGAACATTACAA  
 CCAATGGGTTACTATTCTATTATGCTTCAGGGTCAGACGTGTTCTCCATCTCACTGGAT  
 AATGGTACTGTCAATGATGTAAGGGAATCAAAGTTCAGTCACTAGATAAGCAGTAC  
 AATGATGGGCTGTCCACTTCGTCATTAGCTCTGTCTACCCACAAGATATGAACTGATA  
 GTAGATAAAAAGCAGAGTTGGGAGTAAGAATCCTACCAAAGGAAAAATAGAACAGACACAA  
 GCAAGTGAAAAGAAGTTTTACTTCGGTGGCTACCAATCAGTGTCTCAGTATGCTAATTTT  
 ACTGGCTGCATAAGTAATGCCTACTTTACCAGGGTGGATAGAGATGTGGAGGTTGAAGAT  
 TTCCAACGGTATACTGAAAAGGTCCACACTTCTTTTATGAGTGTCCATTGAGTCTTCA  
 CCATTGTTTCTCCTCCATAAAAAAGGAAAAAATTTATCCAAGCCTAAAGCAAGTCAGAAT  
 AAAAAGGGAGGAAAAAGTAAAGATGCACCTTCATGGGATCCTGTTGCTCTGAAACTCCCA  
 GAGCGGAATACTCCAAGAACTCTCATTGCCACCTTCCAACAGCCCTAGAGCAATAGAG  
 CACGCCTATCAATATGGAGGAACAGCCAACAGCCGCAAGAGTTTGAACACTTAAAAGGA  
 GATTTTGGTGCCAAATCTCAGTTTTCCATTGCTGAGAACTCGTTCCTCCCATGGCATG  
 ATCTTCTATGTCTCAGATCAAGAAGAGAATGACTTCATGACTCTATTTTTGGCCATGGC  
 CGCTTGGTTTACATGTTTAAATGTTGGTCAAAAAAAGTGAAGATTAGAAGCCAGGAGAAA  
 TACAATGATGGCCTGTGGCATGATGTGATATTTATTCGAGAAAGGAGCAGTGGCCGACTG  
 GTAATTGATGGTCTCCGAGTCTAGAAGAAAGTCTTCTCCTACTGAAGCTACCTGGAAA  
 ATCAAGGGTCCCATTTATTTGGGAGGTGTGGCTCCTGGAAGGCTGTGAAAAATGTTTCAG  
 ATTAACCTCATCTACAGTTTTAGTGGCTGTCTCAGCAATCTCAGCTCAATGGGGCTCC

ATCACCTCTGCTTCTCAGACATTCAGTGTGACCCCTTGCTTTGAAGGCCCATGGAACA  
 GGAACCTACTTTTCAACAGAAGGAGGATACGTGGTTCTAGATGAATCTTTCAATATTGGA  
 TTGAAGTTTGAATTGCATTTGAAGTCCGTCCCAGAAGCAGTTCCGGAACCCTGGTCCAC  
 GGCCACAGTGTCAATGGGGAGTACCTAAATGTTTACATGAAAAATGGACAGGTACATGTG  
 AAAGTCAATAATGGCATCAGAGATTTTTCCACCTCAGTTACACCCAAGCAGAGTCTCTGT  
 GATGGCAGATGGCACAGAATTACAGTTATTAGAGATTCTAATGTGGTTCAGTTGGATGTG  
 GACTCTGAAGTGAACCATGTGGTTGGACCCCTGAATCCAAAACCAATTGATCACAGGGAG  
 CCTGTGTTTGTGGAGGTGTTCCAGAATCTCTACTGACACCACGCTTGGCCCCAGCAAA  
 CCCTTCACAGGCTGCATACGCCACTTTGTGATTGATGGACACCCAGTGAGCTTCAGTAAA  
 GCAGCCCTGGTCAGCGGCCCGTAAGCATCAACTCCTGTCCAGCAGCC

<b>Restriction Sites:</b>	Please inquire
<b>ACCN:</b>	NM_001105207
<b>OTI Disclaimer:</b>	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).
<b>OTI Annotation:</b>	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.
<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>	<u><a href="#">NM_001105207.1</a></u> , <u><a href="#">NP_001098677.1</a></u>
<b>RefSeq Size:</b>	7283 bp
<b>RefSeq ORF:</b>	5451 bp
<b>Locus ID:</b>	3910
<b>UniProt ID:</b>	<u><a href="#">Q16363</a></u>
<b>Cytogenetics:</b>	6q21
<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 alpha chain isoform laminin, alpha 4. The domain structure of alpha 4 is similar to that of alpha 3, both of which resemble truncated versions of alpha 1 and alpha 2, in that approximately 1,200 residues at the N-terminus (domains IV, V and VI) have been lost. Laminin, alpha 4 contains the C-terminal G domain which distinguishes all alpha chains from the beta and gamma chains. The RNA analysis from adult and fetal tissues revealed developmental regulation of expression, however, the exact function of laminin, alpha 4 is not known. Tissue-specific utilization of alternative polyA-signal has been described in literature. Alternative splicing results in multiple transcript variants encoding distinct isoforms. [provided by RefSeq, Aug 2011]

Transcript Variant: This variant (3) uses alternate splice sites in the 5' UTR and 5' coding region, compared to variant 1, resulting in a shorter protein (isoform 2), compared to isoform 1. Variants 2 and 3 encode the same isoform (2). Sequence Note: This RefSeq record was created from transcript and genomic sequence data to make the sequence consistent with the reference genome assembly. The genomic coordinates used for the transcript record were based on transcript alignments.