

## Product datasheet for SC118734

### Laminin alpha 4 (LAMA4) (NM\_002290) Human Untagged Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Laminin alpha 4 (LAMA4) (NM_002290) Human Untagged Clone
Tag:	Tag Free
Symbol:	Laminin alpha 4
Synonyms:	CMD1JJ; LAMA3; LAMA4*-1
Mammalian Cell Selection:	None
Vector:	<u>pCMV6-XL4</u>
E. coli Selection:	Ampicillin (100 ug/mL)
Fully Sequenced ORF:	>OriGene ORF within SC118734 sequence for NM_002290 edited (data generated by NextGen Sequencing)

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ATGGCTTTGAGCTCAGCCTGGCGCTCGGTTCTGCCTCTGTGGCTCCTCTGGAGCGCTGCC
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Clone variation with respect to NM\_002290.3  
 827 c=>n;828 a=>n;829 c=>n;1471 t=>c;3328 g=>a

**5' Read Nucleotide Sequence:**

>OriGene 5' read for NM\_002290 unedited  
 CCGCGAATTCGGCAGGAGAGGTGGCCTAGCGCTGGCGGGGCTCACCCCAATCCGTCTGCC  
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 GGAAAATAAGCGAGGCACCGCCGACCACGCGGGAGACCTACGGAGACCCACAGCGCCCCG  
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**3' Read Nucleotide Sequence:**

>OriGene 3' read for NM\_002290 unedited  
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 GTAAGTTTGGCACTCCTTCAATTGTTGTCCATTGCAGACACTTTGGATTCAAGTTAAGA  
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 CGATGAAAGCTTCCACCCGAAAGGAGTACTGTTTCTCCTGGCTGGCTTTGTGTTTCT  
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 CCGCTTTCCGCTCGCTCCTCAACGTGTCCCCCCCCCCCCCACTTTTCCCGGCCGTTTTT  
 CCNAGNCCC GCCCTTCTGCCCCGCGATCCGGGTGGTGGAGTAATTGTTTTTTGGTAC  
 CCCCCGCCCTTGGCAGTTTGCCTTTTTTCTTACCCCCCACCCTTCAACGCAAG

**Restriction Sites:**

NotI-NotI

**ACCN:**

NM\_002290

<b>Insert Size:</b>	5700 bp
<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>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>NM_002290.2, NP_002281.1</u>
<b>RefSeq Size:</b>	6297 bp
<b>RefSeq ORF:</b>	5451 bp
<b>Locus ID:</b>	3910
<b>UniProt ID:</b>	<u>Q16363</u>
<b>Cytogenetics:</b>	6q21
<b>Domains:</b>	LamG, EGF_Lam
<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 (2) uses an alternate in-frame splice site in the 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.