

Product datasheet for RC209515

Laminin alpha 4 (LAMA4) (NM_002290) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Laminin alpha 4 (LAMA4) (NM_002290) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Laminin alpha 4
Synonyms:	CMD1JJ; LAMA3; LAMA4*-1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC209515 ORF sequence Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGGCTTTGAGCTCAGCCTGGCGCTCGGTTCTGCCTCTGTGGCTCCTCTGGAGCGCTGCCTGCTCCCGCG
CCGCGTCCGGGGACGACAACGCTTTTCTTTTTCATTGAAGGGAGCTCAGCGTTGGCAGGCAAGACCC
GCCTGAGACGAGCGAACCCCGCTGGCTCTGGACGCCTGCCGCTCGGCGGAGAAATGCAATGCTGGA
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GCTCAGGATACTGTGTGACTGCCAGCGGAACACAACAGGAGAGCACTGTGAAAAGTGTCTGGATGGTTA
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CATGTCAGGGATGCCGAAGACATGAACAGGGCCACAGCAGCCAGGCAGCGGGACCATGAGAAACAACAGG
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ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RC209515 protein sequence
Red=Cloning site Green=Tags(s)

MALSSAWRSVLPWLWLSAACSRAASGDDNAPFPDIEGSSAVGRQDPETSEPRVALGRLPPAAEKCNA
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ALSIEEGKSGVLSVSSGAAHRHVNEINATIYLLKTKLSERENQYALRKIQINNAENTMKSLLSDVEELV
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LKTRLSDAVKQLQAAERGAQQLGQSRLITEEANRTTMEVQQAATAPMANNLTNWSQNLQHFDDSSAYNTA
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PNGLLFYASGSDVFSISLDNGTVIMDVKIKVQSVDKQYNDGLSHFVISSVSPTRYELIVDKSRVGSKN
PTKKGIEQTQASEKKFYFGGSPISAQYANFTGCI SNAYFTRVDRDVEVEDFQRYTEKVHTSLYECP
IESSPLFLLHKKGNLSKPKASQNKGGKSKDAPSWDPVALKLPERNTPRNSHCHLSNSPRAIEHAYQYGGTAN
SRQEFELKGDGAKSQFSIRLRTRSSHGMIFYVSDQEENDFMTLFLAHGRLVYMFNVGHKLLKIRSQEK
YNDGLWHDVIFIRERSSGRLVIDGLRVLEESLPPTTEATWKIKGPIYLGAVGKAVKNVQINSIYFSGC
LSNLQLNGASITSASQTFSVTPCFEGPMETGTYFSTEGGYVVLDESFNIGLKFEIAFEVVRPRSSSGLVH
GHSVNGEYLVNVMKNGQIVKVNNGIRDFTSVTPKQSLCDGRWHRITVIRDSNVVQLDQVDSEVNHVVG
LNPKPIDHREPVFVGGVPESLLTPRLAPSKPFTGCI RHFVIDGHPVSFKAALVSGAVSINSCPA

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites:

Sgfl-MluI

Cloning Scheme:



ACCN: NM_002290

ORF Size: 5448 bp

OTI Disclaimer: 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: This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

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_002290.2](#), [NP_002281.1](#)

RefSeq Size: 7355 bp

RefSeq ORF: 5451 bp

Locus ID: 3910

UniProt ID: [Q16363](#)

Cytogenetics: 6q21

Domains: LamG, EGF_Lam

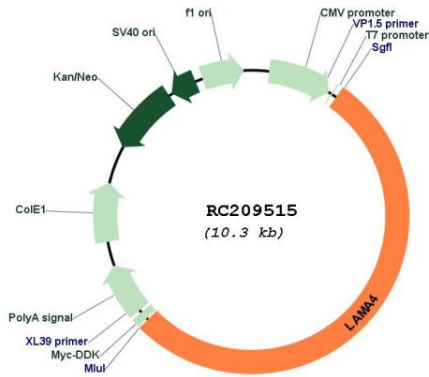
Protein Families: Druggable Genome, Secreted Protein

Protein Pathways: ECM-receptor interaction, Focal adhesion, Pathways in cancer, Small cell lung cancer

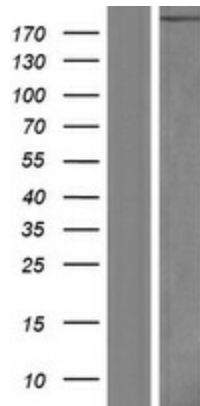
MW: 201.9 kDa

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]

Product images:



Circular map for RC209515



Western blot validation of overexpression lysate (Cat# [LY419410]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC209515 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).