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Product datasheet for RC216928

Laminin gamma 1 (LAMC1) (NM_002293) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Laminin gamma 1 (LAMC1) (NM_002293) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Laminin gamma 1
Synonyms:	LAMB2
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)

ORF Nucleotide Sequence:

>RC216928 representing NM_002293
Red=Cloning site Blue=ORF Green=Tags(s)

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Protein Sequence:

>RC216928 representing NM_002293
Red=Cloning site Green=Tags(s)

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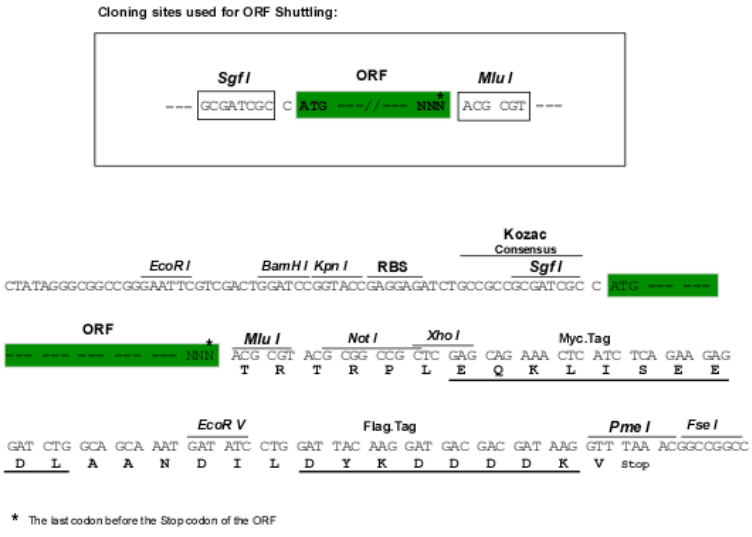
Chromatograms: https://cdn.origene.com/chromatograms/mk6263_a04.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:



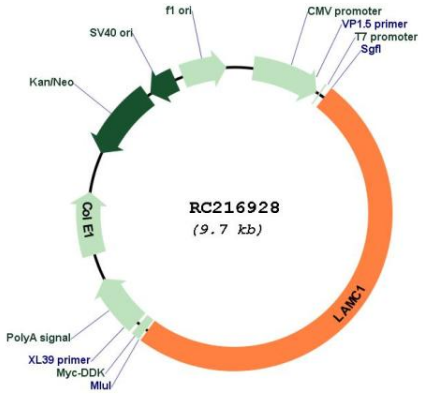
ACCN: NM_002293

ORF Size:	4827 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_002293.4
RefSeq Size:	7923 bp
RefSeq ORF:	4830 bp
Locus ID:	3915
UniProt ID:	P11047
Cytogenetics:	1q25.3
Domains:	LamB, EGF_Lam, laminin_Nterm
Protein Families:	Druggable Genome, Secreted Protein
Protein Pathways:	ECM-receptor interaction, Focal adhesion, Pathways in cancer, Prion diseases, Small cell lung cancer
MW:	177.57 kDa

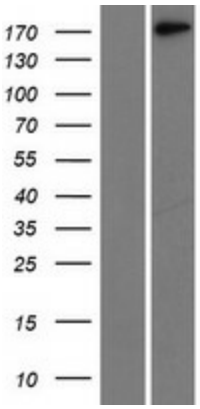
Gene Summary:

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, composed of 3 non identical chains: laminin alpha, beta and gamma (formerly A, B1, and B2, respectively), have 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 gamma chain isoform laminin, gamma 1. The gamma 1 chain, formerly thought to be a beta chain, contains structural domains similar to beta chains, however, lacks the short alpha region separating domains I and II. The structural organization of this gene also suggested that it had diverged considerably from the beta chain genes. Embryos of transgenic mice in which both alleles of the gamma 1 chain gene were inactivated by homologous recombination, lacked basement membranes, indicating that laminin, gamma 1 chain is necessary for laminin heterotrimer assembly. It has been inferred by analogy with the strikingly similar 3' UTR sequence in mouse laminin gamma 1 cDNA, that multiple polyadenylation sites are utilized in human to generate the 2 different sized mRNAs (5.5 and 7.5 kb) seen on Northern analysis. [provided by RefSeq, Aug 2011]

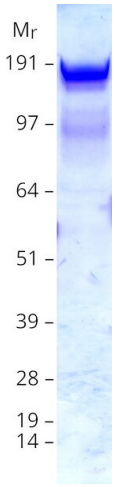
Product images:



Circular map for RC216928



Western blot validation of overexpression lysate (Cat# [LY419413]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from un-transfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC216928 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified LAMC1 protein (Cat# [TP316928]). The protein was produced from HEK293T cells transfected with LAMC1 cDNA clone (Cat# RC216928) using MegaTran 2.0 (Cat# [TT210002]).