

Recombinant Human LAMC1 Protein, Myc/DDK-tagged, C13 and N15-labeled

Cat. No. LAMC1-3869H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	LAMC1 MS Standard C13 and N15-labeled recombinant protein (NP_002284) with a C-terminal MYC/DDK tag, was expressed in HEK293 cells.
Species	Human
Source	HEK293
Description	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

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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.

Molecular Mass 177.57 kDa

AA Sequence

MRGSHRAAPALRPRGRLWPVLAVLAAAAAAGCAQAAMDECTDEGGRPQRCMPEF
VNAAFNVTVVATNTCGTPPEEYCVQTGVTGVTKSCHLCDAGQPHLQHGAFLTDY
NNQADTTWWQSQTMLAGVQYPSSINLT LHLGKAFDITYVRLKFHTSRPESFAIYKRT
REDGPWIPYQYYSGSCENTYSKANRGFIRTGGDEQQALCTDEFSDISPLTGGNVAF
STLEGRPSAYNFDNSPVLQEWVTATDIRVTNLNLTFGDEVFNDPKVLKSYYYAISD
FAVGGRCKCNGHASECMKNEFDKLVCKHNTYGVDCCKLPFFNDRPWRRATA
ESASECLPCDCNGRSQECYFDPELYRSTGHGGHCTNCQDNTDGAHCERCRENFF
RLGNNEACSSSCHCSPVGLSTQCDSYGRCSCKPGVMGDKCDRCQPGFHSLTEAG
CRPCSCDPSGSIDECNVETGRCVCKDNVEGFNCERCKPGFFNLESSNPRGCTPCF
CFGHSSVCTNAVGYSVYSISSTFQIDEDGWRAEQRDGSEASLEWSSERQDIAVISD
SYFPRYFIAPAKFLGKQVLSYGQNLFSFRVDRDTRLAEDLVLEGAGLRVSVPLIA
QGNSYPSETTVKYVFRLEATDYPWRPALTPFEFQKLLNNLTSIKIRGTYSERSAGY
LDDVTLASARPGPGVPATWVESCTCPVGYGGQFCMCLSGYRRETPNLGPYSPCV
LCACNGHSETCDPETGVCNCRDNTAGPHCEKCSGDYGGDSTAGTSSDCQPCPCP
GGSSCAVVPKTKEVVCTNCPTGTTGKRCELDDGYFGDPLGRNGPVRLCRLCQCS
DNIDPNAVGNCNRLTGECLKCIYNTAGFYCDRCKDGGFFGNPLAPNPADKCKACNCN
PYGTMKQQSSCNPVTGQCECLPHVTGQDCGACDPGFYNLQSGQGQCERCDCAL
GSTNGQCDIRTGQCECQPGITGQHCECEVNHFGFGPEGCKPCDCHPEGSLSLQC
KDDGRCECREGFVGNRCDQCEENYFYNRSWPGCQCECPACYRLVKDKVADHRVKL

QELES LIANLGTGDEM VTDQAFEDRLKKAEREVMDLLREAQDVKDVDQNLMDRLQR
VNNTLSSQISRLQNIRNTIEETGNLAEQARAHVENTERLIEIASRELEKAKVAAANVSV
TQPESTGDPNNMTLLAEEARKLAERHKQEADDIVRVAKTANDTSTEAYNLLLRTLAG
ENQTAFEIEELNRKYEQAKNISQDLEKQAA RVHEEAKRAGDKAVEIYASVAQLSPLD
SETLENEANNIKMEAENLEQLIDQKLKDYEDLREDMRGKELEVKNLLEKGKTEQQTA
DQLLARADAAKALAEAAKKGRDTLQEANDILNNLKDFDRRVNDNKTAEEALRKIP
AINQTITEANEKTREAQQALGSAAADATEAKNKAHEAERIASAVQKNATSTKAEER
TFAEVTDL DNEVNNMLKQLQEAEKELKRKQDDADQDMMMAGMASQAAQEAEINAR
KAKNSVTSLLSIINDLLEQLGQLD TVDLNKLNEIEGTLNKAKDEMKVSDLDRKVSDLE
NEAKKQEAAIMDYNRDIEEIMKDIRNLEDIRKTLPSGCFNTPSIEKPTRTRPLEQKLISE
EDLAANDILDYKDDDDKV

Purity	> 80% as determined by SDS-PAGE and Coomassie blue staining
Stability	Stable for 3 months from receipt of products under proper storage and handling conditions.
Storage	Store at -80 centigrade. Avoid repeated freeze-thaw cycles.
Concentration	50 µg/mL as determined by BCA
Storage Buffer	100 mM glycine, 25 mM Tris-HCl, pH 7.3.

GENE INFORMATION

Gene Name	LAMC1 laminin subunit gamma 1 [Homo sapiens (human)]
Official Symbol	LAMC1
Synonyms	LAMC1; laminin, gamma 1 (formerly LAMB2); LAMB2; laminin subunit gamma-1; S-LAM gamma; laminin B2 chain; S-laminin subunit gamma; laminin-2 subunit gamma;

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laminin-3 subunit gamma; laminin-4 subunit gamma; laminin-6 subunit gamma;
laminin-7 subunit gamma; laminin-8 subunit gamma; laminin-9 subunit gamma;
laminin-10 subunit gamma; laminin-11 subunit gamma; MGC87297;

Gene ID [3915](#)

mRNA Refseq [NM_002293](#)

Protein Refseq [NP_002284](#)

MIM [150290](#)

UniProt ID [P11047](#)

SDS-PAGE

