

Recombinant Full Length Human LAMC2 Protein, C-Flag-tagged

Cat. No. LAMC2-1564HFL **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Full Length Human LAMC2 Protein, fused to Flag-tag at C-terminus, was expressed in Mammalian cells.
Species	Human
Source	Mammalian Cells
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 2. The gamma 2 chain, formerly thought to be a truncated version of beta chain (B2t), is highly homologous to the gamma 1 chain; however, it

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lacks domain VI, and domains V, IV and III are shorter. It is expressed in several fetal tissues but differently from gamma 1, and is specifically localized to epithelial cells in skin, lung and kidney. The gamma 2 chain together with alpha 3 and beta 3 chains constitute laminin 5 (earlier known as kalinin), which is an integral part of the anchoring filaments that connect epithelial cells to the underlying basement membrane. The epithelium-specific expression of the gamma 2 chain implied its role as an epithelium attachment molecule, and mutations in this gene have been associated with junctional epidermolysis bullosa, a skin disease characterized by blisters due to disruption of the epidermal-dermal junction. Two transcript variants resulting from alternative splicing of the 3' terminal exon, and encoding different isoforms of gamma 2 chain, have been described. The two variants are differentially expressed in embryonic tissues, however, the biological significance of the two forms is not known. Transcript variants utilizing alternative polyA_signal have also been noted in literature.

Form 25 mM Tris HCl, pH 7.3, 100 mM glycine, 10% glycerol.

Molecular Mass 128.7 kDa

AA Sequence

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MPALWLGCCCLCFSLLLPAARATSRREVCDGKSRQCIFDRELHRQTGNGFRCLN
CNDNTDGIHCEKCKN GFYRHRERDRCLPCNCNSKGSLSARCDNSGRCSCKPGVT
GARCDRCLPGFHM LTDAGCTQDQRLLD SKCD CDPAGIAGPCDAGRCVCKPAVTG
ERCDCRCRSGYYNLDGGNPEGCTQCF CYGHSASCRSSAEYSVHKITST FHQDVDG
WKAVQRNGSPAKLQWSQRHQDV FSSAQRLDPVYFVAPAKFLGNQQVSYGQSLSF
DYRVD RGR HPSAHDVILEGAGLRITAPLMPLGKTLPCGLTKTYTFR LNEHPSNNW
SPQLSYFEYRRLLRNL TALRIRA TYGEYSTGYIDNVT LISARPVSGAPAPWVEQCICP
VG YKGQFCQDCASGYKRDSARLGPF GTCIPCNCQG GGACDPDTGDCYSGDENPD
IECADCPIGFYNDPHDPR SCKPCPCHNGFSCSVM PETEEVVCNNCPPGVTG ARCE
LCADGYFGDPFGEHGPVRPCQPCQCNNNVDP SASGNCDRLTGRCLKCIHNTAGIY
CDQCKAGYFGD PLAPNPADKCRACNCNPMGSEPVGCRSDGTCVCKPGFGGPNC
    
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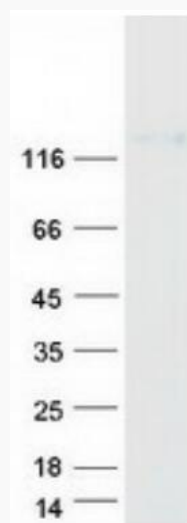
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EHGAFSCPACYNQVKIQMDQFMQQLQRM EALISKAQGGDGVVPDTELEGRMQQA
 EQALQDILRDAQISEGASRSLGLQLAKVRSQENSYSRLDDLKM TVERVRALGSQY
 QNRVRDTHRLITQMQLSLAESEASLGNTNIPASDHYVGPNGFKSLAQEATRLAESHV
 E SASNMEQLTRETEDYSKQALSIVRKALHEGVGSGSGSPDGAVVQGLVEKLEKTK
 SLAQQLTREATQAEIE ADRSYQHSLRLLDSVSRLQGVSDQSFQVEEAKRIKQKADS
 LSTLVTRHMDDEFKRTQKNLGNWKEEAQQLL QNGKSGREKSDQLLSRANLAKSRAQ
 EALSMGNATFYEVESILKNLREFDLQVDNRKAEAEAMKRLSYIS QKVSDASDKTQ
 QAERALGSAAADAQRAKNGAGEALEISSEIEQEIGSLNLEANVTADGALAMEKGLAS
 LK SEMREVEGELERKELEFDTNMDAVQMVITEAQKVDTRAKNAGVTIQDTLNTLDG
 LLHLMDQPLSVDEEGL VLLEQKLSRAKTQINSQLRPMMSLEERARQQRGHLHLL
 TSIDGILADVKNLENIRDNLPPGCYNTQAL
 EQQTRTRPLEQKLISEEDLAANDILDYKDDDDKV

Purity	> 80% as determined by SDS-PAGE and Coomassie blue staining.
Stability	Stable for 12 months from the date of receipt of the product under proper storage and handling conditions. Avoid repeated freeze-thaw cycles.
Storage	Store at -80 centigrade.
Concentration	>50 ug/mL as determined by microplate BCA method.
Preparation	Recombinant protein was captured through anti-DDK affinity column followed by conventional chromatography steps.
Protein Families	Druggable Genome, Secreted Protein
Protein Pathways	ECM-receptor interaction, Focal adhesion, Pathways in cancer, Small cell lung cancer
Full Length	Full L.

GENE INFORMATION

Gene Name	LAMC2 laminin subunit gamma 2 [Homo sapiens (human)]
Official Symbol	LAMC2
Synonyms	B2T; CSF; EBR2; BM600; EBR2A; JEB3A; JEB3B; LAMB2T; LAMNB2
Gene ID	3918
mRNA Refseq	NM_005562.3
Protein Refseq	NP_005553.2
MIM	150292
UniProt ID	Q13753



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Coomassie blue staining of purified LAMC2 protein.