

Recombinant Human LAMB1, His-tagged

Cat. No. LAMB1-29912TH Lot. No. (See product label)

SPECIFICATION

Product Overview	Recombinant fragment, corresponding to amino acids 1388-1786 of Human Laminin beta 1 with an N-terminal His tag; MWt 52kDa.
Species	Human
Source	E.coli
ProteinLength	1388-1786 a.a.
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 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 beta chain isoform laminin, beta 1. The beta 1 chain has 7 structurally distinct domains which it

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shares with other beta chain isomers. The C-terminal helical region containing domains I and II are separated by domain alpha, domains III and V contain several EGF-like repeats, and domains IV and VI have a globular conformation. Laminin, beta 1 is expressed in most tissues that produce basement membranes, and is one of the 3 chains constituting laminin 1, the first laminin isolated from Engelbreth-Holm-Swarm (EHS) tumor. A sequence in the beta 1 chain that is involved in cell attachment, chemotaxis, and binding to the laminin receptor was identified and shown to have the capacity to inhibit metastasis.

Conjugation	HIS
Form	Lyophilised:Reconstitute with 108 µl aqua dest
Storage buffer	Preservative: NoneConstituents: 0.5% Trehalose, 6M Urea, 100mM Sodium phosphate, 10mM Sodium chloride, pH 4.5
Storage	Shipped at 4°C. Upon delivery aliquot and store at -80oC. Avoid freeze / thaw cycles.
Sequences of amino acids	(Amino acid sequence (Sequence determined by 5 Sequencing))LDLSAAAEMTCGT PPGASCSETECGG PNCRTDEGERKCGGPGCGGLVTVAHNAWQKAMDLDQDV LS ALAEVEQLSKMVSEAKLRADEAKQSAEDILLKT NAT KEKMDKSNEELRNLIKQIRNFL TQDSADLDSIEAVANEVL KMEMPSTPQQQLQNLTEDIRERVESLSQVEVILQHSAAD I ARAEMLLEEAKRASKSATDVKV TADMVKEALEEAEKA QVAAEKA IKQADEDIQGTQ NLLTSIESETAASEETLFN ASQRISELERNVEELKRKAAQNSGEAEYIEKV VYTVKQS AEDVKKTL DGELDEKYKKVENLIAKKTEESADARRKAEM LQNEAKTLLAQANSKLQL LKDLERKYEDNQRYLEDKAQ ELARLEGEVRSLLKDISQKVAVYSTCL
Sequence Similarities	Contains 13 laminin EGF-like domains.Contains 1 laminin IV type B domain.Contains 1 laminin N-terminal domain.

GENE INFORMATION

Gene Name	LAMB1 laminin, beta 1 [Homo sapiens]
Official Symbol	LAMB1
Synonyms	LAMB1; laminin, beta 1; CLM, cutis laxa with marfanoid phenotype; laminin subunit beta-1;
Gene ID	3912
mRNA Refseq	NM_002291
Protein Refseq	NP_002282
MIM	150240
Uniprot ID	P07942
Chromosome Location	7q22
Pathway	Alpha6-Beta4 Integrin Signaling Pathway, organism-specific biosystem; Amoebiasis, organism-specific biosystem; Amoebiasis, conserved biosystem; Axon guidance, organism-specific biosystem; Developmental Biology, organism-specific biosystem;
Function	enzyme binding; extracellular matrix structural constituent; glycosphingolipid binding; integrin binding; structural molecule activity;

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