BOSTER
antibody and ELISA experts

BOSTER BIOLOGICAL TECHNOLOGY
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Anti-Laminin subunit gamma-2 LAMC2 Antibody

Catalog Number: PA1582

About LAMC2

Laminin gamma2, Laminin subunit gamma-2, is a protein that in humans is encoded by the LAMC2 gene. 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 gamma chain isoform laminin, gamma 2. The gamma 2 chain, formerly though to be a truncated version of beta chain (B2t), is highly homologous to the gamma 1 chain; however, it 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.

Overview

Product Name	Anti-Laminin subunit gamma-2 LAMC2 Antibody
Reactive Species	Human, Mouse, Rat
Description	Boster Bio Anti-Laminin subunit gamma-2 LAMC2 Antibody catalog # PA1582. Tested in IHC, WB applications. This antibody reacts with Human, Mouse, Rat.
Application	IHC, WB
Clonality	Polyclonal
Formulation	Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg Thimerosal, 0.05mg NaN3.
Storage Instructions	Store at -20˚C for one year from date of receipt. After reconstitution, at 4˚C for one month. It can also be aliquotted and stored frozen at -20˚C for six months. Avoid repeated freeze-thaw cycles.
Host	Rabbit
Uniprot ID	Q13753

Technical Details

Immunogen	A synthetic peptide corresponding to a sequence at the C-terminus of human LAMC2, identical to the related rat and mouse sequences.

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Predicted Reactive Species	Hamster
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (EK1002) for Western blot, and HRP Conjugated anti-Rabbit IgG Super Vision Assay Kit (SV0002-1) for IHC(P).
Cross Reactivity	No cross-reactivity with other proteins
Isotype	Rabbit IgG
Form	Lyophilized
Concentration	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml.
Purification	Immunogen affinity purified.
Suggested Dilutions	Dilute the sample so that the expected range of concentrations fall within the detection range of this kit. If the expected range of concentration is unknown, a pilot test should be conducted to decide the optimal dilution ratio for your samples. Some PubMed article(s) citing the expression level of this target are as follows: Boster Bio's internal QC testing used: Western blot, 0.1-0.5ug/ml, Human, Mouse, Rat Immunohistochemistry (Paraffin-embedded Section), 0.5-1ug/ml, Human, By Heat

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Anti-Laminin subunit gamma-2 LAMC2 Antibody (PA1582) Images

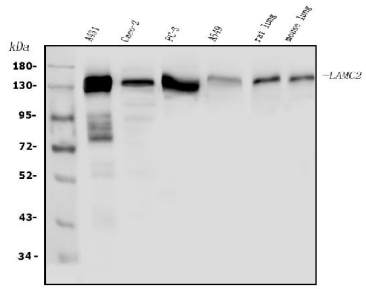

Figure 1.Western blot analysis of LAMC2 using anti-LAMC2 antibody (PA1582).
Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 50ug of sample under reducing conditions.
Lane 1: human A431 whole cell lysates,
Lane 2: human Caco-2 whole cell lysates.
Lane 3: human PC-3 whole cell lysates,
Lane 4: human A549 whole cell lysates,
Lane 5: rat lung tissue lysates.
Lane 6: mouse lung tissue lysates.
After Electrophoresis, proteins were transferred to a Nitrocellulose membrane at 150mA for 50-90 minutes. Blocked the membrane with 5% Non-fat Milk/ TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-LAMC2 antigen affinity purified polyclonal antibody (Catalog # PA1582) at 0.5 ug/mL overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:5000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog # EK1002) with Tanon 5200 system. A specific band was detected for LAMC2 at approximately 131KD. The expected band size for LAMC2 is at 131KD.

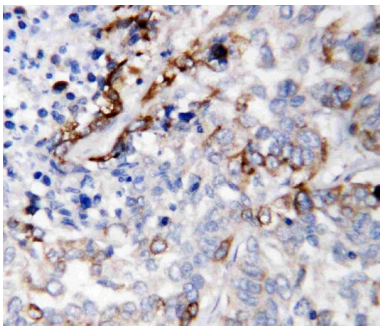

Figure 2. IHC analysisof LAMC2 using anti-LAMC2 antibody (PA1582).
LAMC2 was detected in paraffin-embedded section of human lung cancertissue. Heat mediated antigen retrieval was performed inEDTA buffer (pH8.0, epitope retrieval solution). Thetissue section was blocked with 10% goat serum. The tissue sectionwasthen incubated with 1ug/ml rabbit anti-LAMC2 Antibody (PA1582) overnight at 4°C. Biotinylated goat anti-rabbitIgG was used assecondary antibody and incubated for 30 minutes at 37°C. The tissuesection was developed using Strepavidin-Biotin-Complex (SABC)(Catalog# SA1022) with DAB as the chromogen.