

Laminin γ -1 (D18): sc-59846

BACKGROUND

Laminins are essential and abundant structural non-collagenous glycoproteins localizing to basement membranes. Basement membranes (cell-associated extracellular matrices (ECMs)) are polymers of laminins with stabilizing Type IV Collagen networks, Nidogen, and several proteoglycans. Basement membranes are found under epithelial layers, around the endothelium of blood vessels, and surrounding muscle, peripheral nerve, and fat cells. Formation of basement membranes influences cell proliferation, phenotype, migration, gene expression, and tissue architecture. Each Laminin is a heterotrimer of α , β , and γ chain subunits that undergoes cell-secretion and incorporation into the ECM. Laminins can self-assemble, bind to other matrix macromolecules, and have unique and shared cell interactions mediated by integrins, dystroglycan, and cognate laminin receptors. The human Laminin γ -1 gene maps to chromosome 1q25.3 and is ubiquitously expressed in tissues that produce basement membranes.

REFERENCES

1. Tryggvason, K. 1993. The Laminin family. *Curr. Opin. Cell Biol.* 5: 877-882.
2. Schnaper, H.W., et al. 1993. Role of Laminin in endothelial cell recognition and differentiation. *Kidney Int.* 43: 20-25.
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4. Luckenbill-Edds, L. 1997. Laminin and the mechanism of neuronal outgrowth. *Brain Res. Brain Res. Rev.* 23: 1-27.
5. Ekblom, M., et al. 1998. Laminin isoforms and epithelial development. *Ann. N.Y. Acad. Sci.* 857: 194-211.
6. Hansen, K. and Abrass, C.K. 1999. Role of Laminin isoforms in glomerular structure. *Pathobiology* 67: 84-91.
7. Aberdam, D., et al. 2000. Transcriptional regulation of Laminin gene expression. *Microsc. Res. Tech.* 51: 228-237.
8. Colognato, H. and Yurchenco, P.D. 2000. Form and function: the Laminin family of heterotrimers. *Dev. Dyn.* 218: 213-234.
9. LocusLink Report (LocusID: 3912). <http://www.ncbi.nlm.nih.gov/LocusLink/>

CHROMOSOMAL LOCATION

Genetic locus: LAMC1 (human) mapping to 1q25.3; Lamc1 (mouse) mapping to 1 G3.

SOURCE

Laminin γ -1 (D18) is a mouse monoclonal antibody raised against glomerular basement membrane of rat origin.

PRODUCT

Each vial contains 200 μ g IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

APPLICATIONS

Laminin γ -1 (D18) is recommended for detection of Laminin γ -1 of mouse, rat and human origin by immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for Laminin γ -1 siRNA (h): sc-29388, Laminin γ -1 siRNA (m): sc-35780, Laminin γ -1 shRNA Plasmid (h): sc-29388-SH, Laminin γ -1 shRNA Plasmid (m): sc-35780-SH, Laminin γ -1 shRNA (h) Lentiviral Particles: sc-29388-V and Laminin γ -1 shRNA (m) Lentiviral Particles: sc-35780-V.

Molecular Weight of Laminin γ -1: 200-215 kDa.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz[®] Mounting Medium: sc-24941 or UltraCruz[®] Hard-set Mounting Medium: sc-359850. 2) Immunohistochemistry: use m-IgG κ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

SELECT PRODUCT CITATIONS

1. Suzuki, T., et al. 2015. An injured tissue affects the opposite intact peritoneum during postoperative adhesion formation. *Sci. Rep.* 5: 7668.
2. Tomii, S., et al. 2017. Cortical actin alteration at the matrix-side cytoplasm in lung adenocarcinoma cells and its significance in invasion. *Pathobiology* 84: 171-183.
3. Plenge-Tellechea, L.F., et al. 2019. Acanthocytosis and brain damage in area postrema and choroid plexus: description of novel signs of *Loxosceles apache* envenomation in rats. *PLoS ONE* 14: e0211689.

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.