

Laminin γ -1 (3E10): sc-65643

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

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2. Schnaper, H.W., Kleinman, H.K. and Grant, D.S. 1993. Role of Laminin in endothelial cell recognition and differentiation. *Kidney Int.* 43: 20-25.
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6. Hansen, K. and Abrass, C.K. 1999. Role of Laminin isoforms in glomerular structure. *Pathobiology* 67: 84-91.
7. Aberdam, D., Virolle, T. and Simon-Assmann, P. 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.
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CHROMOSOMAL LOCATION

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

SOURCE

Laminin γ -1 (3E10) is a rat monoclonal antibody raised against endothelial cell Laminin of mouse origin.

PRODUCT

Each vial contains 200 μ g IgG₁ in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

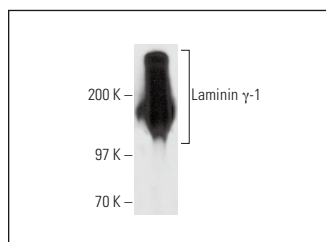
Laminin γ -1 (3E10) is recommended for detection of Laminin γ -1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, 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.

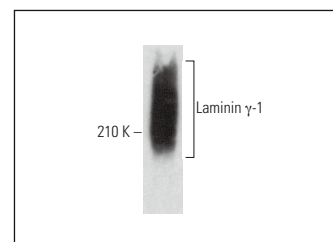
Molecular Weight of Laminin γ -1: 200-215 kDa.

Positive Controls: NIH/3T3 whole cell lysate: sc-2210, ES-D3 whole cell lysate: sc-364776 or A-431 whole cell lysate: sc-2201.

DATA



Laminin γ -1 (3E10): sc-65643. Western blot analysis of Laminin γ -1 expression in NIH/3T3 whole cell lysate.



Laminin γ -1 (3E10): sc-65643. Western blot analysis of Laminin γ -1 expression in ES-D3 whole cell lysate.

SELECT PRODUCT CITATIONS

1. Norton, E.S., Whaley, L.A., Ulloa-Navas, M.J., García-Tárraga, P., Meneses, K.M., Lara-Velazquez, M., Zarco, N., Carrano, A., Quiñones-Hinojosa, A., García-Verdugo, J.M. and Guerrero-Cázares, H. 2022. Glioblastoma disrupts the ependymal wall and extracellular matrix structures of the subventricular zone. *Fluids Barriers CNS* 19: 58.
2. Alonso, F., Li, L., Fremaux, I., Reinhardt, D.P. and Génot, E. 2022. Fibrillin-1 regulates arteriole integrity in the retina. *Biomolecules* 12: 1330.
3. Norris, R.P. and Jaffe, L.A. 2024. Granulosa cells alone, without theca cells, can mediate LH-induced oocyte meiotic resumption. *Endocrinology* 165: bqad200.

STORAGE

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

RESEARCH USE

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