SANTA CRUZ BIOTECHNOLOGY, INC.

Laminin γ-1 (A5): sc-33708

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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.
3. Engvall, E., et al. 1996. Domains of Laminin. J. Cell. Biochem. 61: 493-501.
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., et al. 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., et al. 2000. Form and function: the Laminin family of heterotrimers. Dev. Dyn. 218: 213-234.
9. LocusLink Report (LocusID: 3915). 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 (A5) is a rat monoclonal antibody raised against partially purified preparation of Laminin from the EHS mouse tumor.

PRODUCT

Each vial contains 200 µg IgG_{2a} in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

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

APPLICATIONS

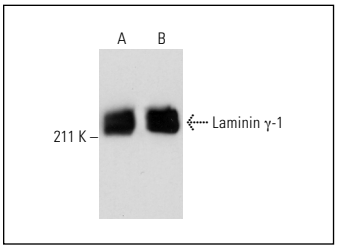
Laminin γ-1 (A5) is recommended for detection of Laminin γ-1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution 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.

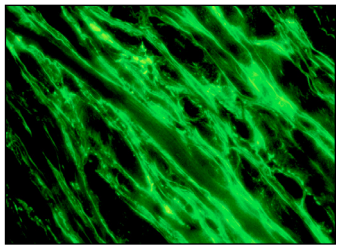
Molecular Weight of Laminin γ-1: 200-215 kDa.

Positive Controls: A-431 whole cell lysate: sc-2201, NIH/3T3 whole cell lysate: sc-2210 or HeLa whole cell lysate: sc-2200.

DATA



Western blot analysis of Laminin γ-1 expression in HeLa (**A**) and A-431 (**B**) whole cell lysates immunoprecipitated with Laminin γ-1 (A5): sc-33708 and detected with Laminin γ-1 (D-3): sc-17751.



Laminin γ-1 (A5): sc-33708. Immunofluorescence staining of normal human cornea frozen section showing trabecular meshwork staining.

SELECT PRODUCT CITATIONS

1. Uchio-Yamada, K., et al. 2020. Tensin2 is important for podocyte-glomerular basement membrane interaction and integrity of glomerular filtration barrier. Am. J. Physiol. Renal Physiol. 318: F1520-F1530.

RESEARCH USE

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

PROTOCOLS

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