SANTA CRUZ BIOTECHNOLOGY, INC.

Laminin γ-3 (2#): sc-517444

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-3 gene maps to chromosome 9q34.12 and is an element of the apical surface of ciliated epithelial cells of lung, oviduct, epididymis, ductus deferens and seminiferous tubules.

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. and Wewer, U.M. 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. Acad. N.Y. 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: 10319). http://www.ncbi.nlm.nih.gov/LocusLink/

CHROMOSOMAL LOCATION

Genetic locus: Lamc3 (mouse) mapping to 2 B.

SOURCE

Laminin γ-3 (2#) is a mouse monoclonal antibody raised against a recombinant protein corresponding to amino acids 1250-1418 of Laminin γ-3 of mouse origin.

PRODUCT

Each vial contains 100 µg IgG_1 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-3 (2#) is recommended for detection of Laminin γ-3 of mouse and rat 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for Laminin γ-3 siRNA (m): sc-35787, Laminin γ-3 shRNA Plasmid (m): sc-35787-SH and Laminin γ-3 shRNA (m) Lentiviral Particles: sc-35787-V.

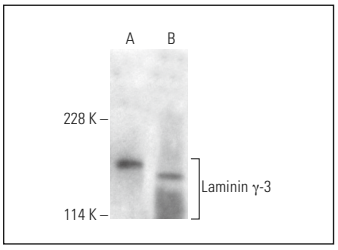
Molecular Weight of Laminin γ-3: 170 kDa.

Positive Controls: mouse testis extract: sc-2405.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



Laminin γ-3 (2#): sc-517444. Western blot analysis of Laminin γ-3 expression in JAR whole cell lysate (**A**) and mouse testis tissue extract (**B**).

SELECT PRODUCT CITATIONS

1. Merico, V., et al. 2019. Sertoli-immature spermatids disengagement during testis regression in the armadillo. Reproduction 157: 27-42.

STORAGE

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