

Laminin γ -3 (C-19): sc-16601

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 (human) mapping to 9q34.12; Lamc3 (mouse) mapping to 2 B.

SOURCE

Laminin γ -3 (C-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of Laminin γ -3 of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-16601 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Laminin γ -3 (C-19) is recommended for detection of Laminin γ -3 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 solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3,000)

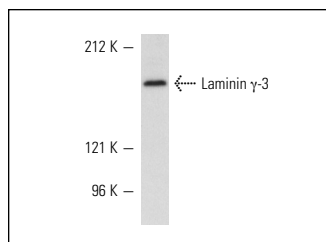
Laminin γ -3 (C-19) is also recommended for detection of Laminin γ -3 in additional species, including bovine and porcine.

Suitable for use as control antibody for Laminin γ -3 siRNA (h): sc-35786, Laminin γ -3 siRNA (m): sc-35787, Laminin γ -3 shRNA Plasmid (h): sc-35786-SH, Laminin γ -3 shRNA Plasmid (m): sc-35787-SH, Laminin γ -3 shRNA (h) Lentiviral Particles: sc-35786-V and Laminin γ -3 shRNA (m) Lentiviral Particles: sc-35787-V.

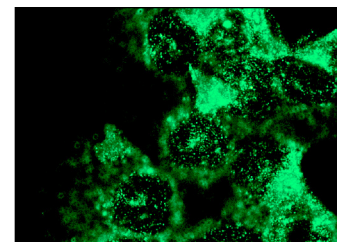
Molecular Weight of Laminin γ -3: 170 kDa.

Positive Controls: JAR cell lysate: sc-2276.

DATA



Laminin γ -3 (C-19): sc-16601. Western blot analysis of Laminin γ -3 expression in JAR whole cell lysate.



Laminin γ -3 (C-19): sc-16601. Immunofluorescence staining of methanol-fixed JAR cells showing membrane staining.

SELECT PRODUCT CITATIONS

1. Siu, M.K., et al. 2004. Interactions of proteases, protease inhibitors, and the β 1 integrin/Laminin γ -3 protein complex in the regulation of ectoplasmic specialization dynamics in the rat testis. *Biol. Reprod.* 70: 945-964.
2. Xia, W., et al. 2005. Disruption of Sertoli-germ cell adhesion function in the seminiferous epithelium of the rat testis can be limited to adherens junctions without affecting the blood-testis barrier integrity: an *in vivo* study using an androgen suppression model. *J. Cell. Physiol.* 205: 141-157.

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.