SANTA CRUZ BIOTECHNOLOGY, INC.

Laminin α-3 (C-19): sc-16585

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 α-3 gene maps to chromosome 18q11.2 and encodes the α subunit of Laminin 5, which influences cell adhesion, signal transduction and differentiation of keratinocytes.

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: 3907). http://www.ncbi.nlm.nih.gov/LocusLink/

CHROMOSOMAL LOCATION

Genetic locus: LAMA3 (human) mapping to 18q11.2.

SOURCE

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

PRODUCT

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

Blocking peptide available for competition studies, sc-16585 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

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

APPLICATIONS

Laminin α-3 (C-19) is recommended for detection of Laminin α-3 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (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 α-3 siRNA (h): sc-43145, Laminin α-3 shRNA Plasmid (h): sc-43145-SH and Laminin α-3 shRNA (h) Lentiviral Particles: sc-43145-V.

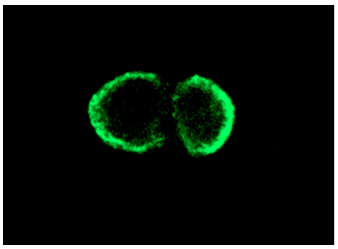
Molecular Weight of Laminin α-3: 200 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



Laminin α-3 (C-19): sc-16585. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization.

SELECT PRODUCT CITATIONS

1. Dietze, E.C., et al. 2005. CREB-binding protein regulates apoptosis and growth of HMECs grown in reconstituted ECM via Laminin-5. J. Cell Sci. 118: 5005-5022.
2. Grootenboer-Mignot, S., et al. 2009. Place of human amniotic membrane immunoblotting in the diagnosis of autoimmune bullous dermatoses. Br. J. Dermatol. 162: 743-750.
3. Sprenger, A., et al. 2013. Consistency of the proteome in primary human keratinocytes with respect to gender, age, and skin localization. Mol. Cell. Proteomics 12: 2509-2521.

STORAGE

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