SANTA CRUZ BIOTECHNOLOGY, INC.

Laminin α-1 (C-20): sc-6016

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 α-1 gene maps to chromosome 18p11.31 and is over-expressed in Alzheimer disease frontal cortex.

REFERENCES

1. Tryggvason, K. 1993. The laminin family. Curr. Opin. Cell Biol. 5: 877-882.
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.
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., Falk, M., Salmivirta, K., Durbeej, M. and Ekblom, P. 1998. Laminin isoforms and epithelial development. Ann. Acad. NY 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., 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.
9. LocusLink Report (LocusID: 3907). http://www.ncbi.nlm.nih.gov/LocusLink/

CHROMOSOMAL LOCATION

Genetic locus: LAMA1 (human) mapping to 18p11.31.

SOURCE

Laminin α-1 (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of Laminin α-1 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-6016 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Laminin α-1 (C-20) is recommended for detection of Laminin α-1 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-1 siRNA (h): sc-37125, Laminin α-1 shRNA Plasmid (h): sc-37125-SH and Laminin α-1 shRNA (h) Lentiviral Particles: sc-37125-V.

Molecular Weight of Laminin α-1: 400 kDa.

Positive Controls: Caki-1 cell lysate: sc-2224.

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.

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.

PROTOCOLS

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