SANTA CRUZ BIOTECHNOLOGY, INC.

Laminin β-1 (LT3): sc-33709

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Laminins are essential and abundant structural non-collagenous glyco-proteins 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 β-1 gene maps to chromosome 7q31.1 and is ubiquitously expressed in tissues that produce basement membranes.

CHROMOSOMAL LOCATION

Genetic locus: LAMB1 (human) mapping to 7q31.1; Lamb1 (mouse) mapping to 12 A2.

SOURCE

Laminin β-1 (LT3) is a rat monoclonal antibody raised against partially purified preparation of Laminin from the EHS mouse tumor.

PRODUCT

Each vial contains 200 µg IgG_1 in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Laminin β-1 (LT3) is available conjugated to agarose (sc-33709 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-33709 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-33709 PE), fluorescein (sc-33709 FITC), Alexa Fluor® 488 (sc-33709 AF488), Alexa Fluor® 546 (sc-33709 AF546), Alexa Fluor® 594 (sc-33709 AF594) or Alexa Fluor® 647 (sc-33709 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-33709 AF680) or Alexa Fluor® 790 (sc-33709 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

Laminin β-1 (LT3) is recommended for detection of Laminin β-1 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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 β-1 siRNA (h): sc-29387, Laminin β-1 siRNA (m): sc-35781, Laminin β-1 shRNA Plasmid (h): sc-29387-SH, Laminin β-1 shRNA Plasmid (m): sc-35781-SH, Laminin β-1 shRNA (h) Lentiviral Particles: sc-29387-V and Laminin β-1 shRNA (m) Lentiviral Particles: sc-35781-V.

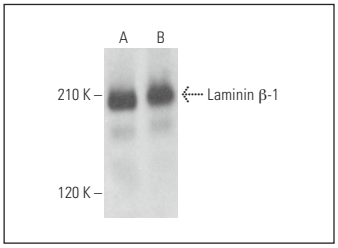
Molecular Weight of Laminin β-1: 220 kDa.

Positive Controls: NIH/3T3 whole cell lysate: sc-2294.

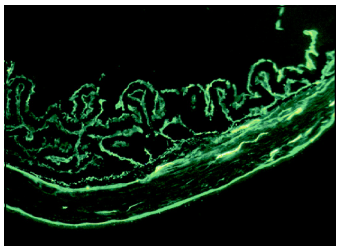
STORAGE

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

DATA



Laminin β-1 (LT3): sc-33709. Western blot analysis of Laminin β-1 expression in NIH/3T3 (**A**) and JAR (**B**) whole cell lysates.



Laminin β-1 (LT3): sc-33709. Immunofluorescence staining of normal mouse eye frozen section showing basement membrane, Descemet's membrane and smooth muscle staining.

SELECT PRODUCT CITATIONS

1. Wang, A., et al. 2017. TWEAK/Fn14 promotes pro-inflammatory cytokine secretion in hepatic stellate cells via NFκB/Stat3 pathways. Mol. Immunol. 87: 67-75.
2. Lindström, N.O., et al. 2018. Conserved and divergent molecular and anatomic features of human and mouse nephron patterning. J. Am. Soc. Nephrol. 29: 825-840.
3. Leng, S., et al. 2020. β-catenin and FGFR2 regulate postnatal rosette-based adrenocortical morphogenesis. Nat. Commun. 11: 1680.
4. Altera, A., et al. 2021. The extracellular matrix complexity of idiopathic epiretinal membranes and the bilaminar arrangement of the associated internal limiting membrane in the posterior retina. Graefes Arch. Clin. Exp. Ophthalmol. 259: 2559-2571.
5. Tran, T., et al. 2022. A scalable organoid model of human autosomal dominant polycystic kidney disease for disease mechanism and drug discovery. Cell Stem Cell 29: 1083-1101.e7.
6. Pennarossa, G., et al. 2022. Impact of aging on the ovarian extracellular matrix and derived 3D scaffolds. Nanomaterials 12: 345.
7. Valentine, H., et al. 2022. Expanding the prostate cancer cell line repertoire with ACRJ-PC28, an AR-negative neuroendocrine cell line derived from an African-Caribbean patient. Cancer Res. Commun. 2: 1355-1371.
8. Zhu, Y., et al. 2023. Structure of rosettes in the zona glomerulosa of human adrenal cortex. J. Anat. 243: 684-689.
9. Okuyama, T., et al. 2025. The matricellular protein Fibulin-5 regulates β-cell proliferation in an autocrine/paracrine manner. iScience 28: 111856.

RESEARCH USE

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