

Laminin β -1 (H-300): sc-5583

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 β -1 gene maps to chromosome 7q31.1 and is ubiquitously expressed in tissues that produce basement membranes.

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.

CHROMOSOMAL LOCATION

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

SOURCE

Laminin β -1 (H-300) is a rabbit polyclonal antibody raised against amino acids 1487-1786 mapping at the C-terminus of Laminin β -1 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.

APPLICATIONS

Laminin β -1 (H-300) is recommended for detection of Laminin β -1 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 1:30-1:3000). Laminin β -1 (H-300) is also recommended for detection of Laminin β -1 in additional species, including equine, canine, bovine and porcine.

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.

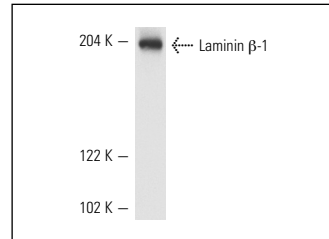
Molecular Weight of Laminin β -1: 220 kDa.

Positive Controls: NIH/3T3 whole cell lysate: sc-2210, A-431 whole cell lysate: sc-2201 or rat kidney extract: sc-2394.

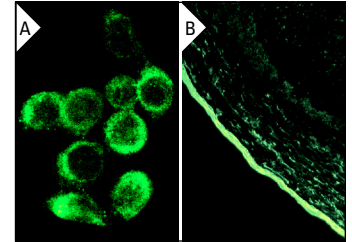
STORAGE

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 (H-300): sc-5583. Western blot analysis of Laminin β -1 expression in A-431 whole cell lysate.



Laminin β -1 (H-300): sc-5583. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization (A) and immunofluorescence staining of normal mouse eye frozen section showing basement membrane staining (B).

SELECT PRODUCT CITATIONS

1. Boshuizen, J.A., et al. 2004. Rotavirus enterotoxin NSP4 binds to the extracellular matrix proteins Laminin β -3 and fibronectin. *J. Virol.* 78: 10045-10053.
2. Zenker, M., et al. 2004. Human laminin β -2 deficiency causes congenital nephrosis with mesangial sclerosis and distinct eye abnormalities. *Hum. Mol. Genet.* 13: 2625-2632.
3. Marabese, M., et al. 2008. HtrA2 enhances the apoptotic functions of p73 on bax. *Cell Death Differ.* 15: 849-858.
4. Castaldo, C., et al. 2008. CD117-positive cells in adult human heart are localized in the subepicardium, and their activation is associated with laminin-1 and α 6 integrin expression. *Stem Cells* 26: 1723-1731.
5. Kvist, A.J., et al. 2008. The major basement membrane components localize to the chondrocyte pericellular matrix—a cartilage basement membrane equivalent? *Matrix Biol.* 27: 22-33.
6. Küttner, V., et al. 2013. Global remodelling of cellular microenvironment due to loss of collagen VII. *Mol. Syst. Biol.* 9: 657.

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.



Try **Laminin β -1 (A-1): sc-17810** or **Laminin β -1 (LT3): sc-33709**, our highly recommended monoclonal alternatives to Laminin β -1 (H-300).