

Laminin α -1 (H-300): sc-5582

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., 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. Acad. N.Y. Sci.* 857: 194-211.
6. Hansen, K. et al. 1999. Role of laminin isoforms in glomerular structure. *Pathobiology* 67: 84-91.

CHROMOSOMAL LOCATION

Genetic locus: LAMA1 (human) mapping to 18p11.31; Lama1 (mouse) mapping to 17 E1.1.

SOURCE

Laminin α -1 (H-300) is a rabbit polyclonal antibody raised against amino acids 1856-2099 mapping within an internal region of Laminin α -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.

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.

APPLICATIONS

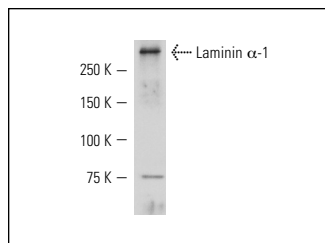
Laminin α -1 (H-300) is recommended for detection of Laminin α -1 of human and, to a lesser extent, mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (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 siRNA (m): sc-37126, Laminin α -1 shRNA Plasmid (h): sc-37125-SH, Laminin α -1 shRNA Plasmid (m): sc-37126-SH, Laminin α -1 shRNA (h) Lentiviral Particles: sc-37125-V and Laminin α -1 shRNA (m) Lentiviral Particles: sc-37126-V.

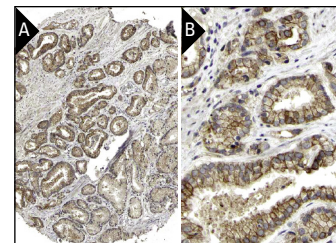
Molecular Weight of Laminin α -1: 356 kDa.

Positive Controls: Caki-1 cell lysate: sc-2224 or HeLa whole cell lysate: sc-2200.

DATA



Laminin α -1 (H-300): sc-5582. Western blot analysis of Laminin α -1 expression in Caki-1 whole cell lysate.



Laminin α -1 (H-300): sc-5582. Immunoperoxidase staining of formalin fixed, paraffin-embedded human prostate cancer tissue showing membrane staining of tumor cells (low and high magnification). Kindly provided by The Swedish Human Protein Atlas (HPA) program.

SELECT PRODUCT CITATIONS

1. Faisal Khan, K.M., et al. 2002. Exposure of cryptic domains in the α 1-chain of Laminin-1 by elastase stimulates macrophages urokinase and matrix metalloproteinase-9 expression. *J. Biol. Chem.* 277: 13778.
2. 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.
3. Fullar, A., et al. 2015. Remodeling of extracellular matrix by normal and tumor-associated fibroblasts promotes cervical cancer progression. *BMC Cancer* 15: 256.

MONOS
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Try **Laminin α -1 (G-12): sc-74418** or **Laminin α -1 (F-8): sc-74417**, our highly recommended monoclonal alternatives to Laminin α -1 (H-300).