

Laminin α -4 (H-194): sc-20144

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 -4 gene maps to chromosome 6q21 and is expressed in adult heart, lung, ovary, small and large intestines, liver, and placenta.

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: LAMA4 (human) mapping to 6q21; Lama4 (mouse) mapping to 10 B1.

SOURCE

Laminin α -4 (H-194) is a rabbit polyclonal antibody raised against amino acids 1517-1710 mapping near the C-terminus of Laminin α -4 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 α -4 (H-194) is recommended for detection of Laminin α -4 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 α -4 (H-194) is also recommended for detection of Laminin α -4 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for Laminin α -4 siRNA (h): sc-43147, Laminin α -4 siRNA (m): sc-43148, Laminin α -4 shRNA Plasmid (h): sc-43147-SH, Laminin α -4 shRNA Plasmid (m): sc-43148-SH, Laminin α -4 shRNA (h) Lentiviral Particles: sc-43147-V and Laminin α -4 shRNA (m) Lentiviral Particles: sc-43148-V.

Molecular Weight of Laminin α -4: 227 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 goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

SELECT PRODUCT CITATIONS

1. Yu, W.M., et al. 2005. Schwann cell-specific ablation of Laminin γ -1 causes apoptosis and prevents proliferation. *J. Neurosci.* 25: 4463-4472.
2. Salerno, S., et al. 2009. Improved functions of human hepatocytes on NH3 plasma-grafted PEEK-WC-PU membranes. *Biomaterials* 39: 4348-4356.
3. Salerno, S., et al. 2011. Human hepatocytes and endothelial cells in organotypic membrane systems. *Biomaterials* 32: 8848-8859.

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.



Try **Laminin α -4 (6C3): sc-130541**, our highly recommended monoclonal alternative to Laminin α -4 (H-194).