SANTA CRUZ BIOTECHNOLOGY, INC.

Laminin α-1 (M-20): sc-6017

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 18p11.3 and is over-expressed in Alzheimer disease frontal cortex.

CHROMOSOMAL LOCATION

Genetic locus: Lama1 (mouse) mapping to 17 E1.1.

SOURCE

Laminin α-1 (M-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of Laminin α-1 of mouse 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-6017 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

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.

APPLICATIONS

Laminin α-1 (M-20) is recommended for detection of Laminin α-1 of mouse and rat 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).

Laminin α-1 (M-20) is also recommended for detection of Laminin α-1 in additional species, including equine and bovine.

Suitable for use as control antibody for Laminin α-1 siRNA (m): sc-37126, Laminin α-1 shRNA Plasmid (m): sc-37126-SH and Laminin α-1 shRNA (m) Lentiviral Particles: sc-37126-V.

Molecular Weight of Laminin α-1: 356 kDa.

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.

SELECT PRODUCT CITATIONS

1. Murase, S., et al. 2002. Deleted in colorectal carcinoma and differentially expressed integrins mediate the directional migration of neural precursors in the rostral migratory stream. J. Neurosci. 22: 3568-3579.
2. Fujigaki, Y., et al. 2002. Mechanisms and kinetics of Bowman's epithelial-myofibroblast transdifferentiation in the formation of glomerular crescents. Nephron 92: 203-212.
3. Yagi, T., et al. 2002. Immunolocalization of Laminin α-1-like antigens around synapses in mouse cerebellar perineuronal nets. Histochem. J. 34: 559-565.
4. Lin, E.Y., et al. 2003. Progression to malignancy in the polyoma middle T oncoprotein mouse breast cancer model provides a reliable model for human diseases. Am. J. Pathol. 163: 2113-2126.
5. Chaboissier, M.C., et al. 2004. Functional analysis of Sox-8 and Sox-9 during sex determination in the mouse. Development 131: 1891-1901.
6. Tatsumi, R., et al. 2006. Satellite cell activation in stretched skeletal muscle and the role of nitric oxide and hepatocyte growth factor. Am. J. Physiol., Cell Physiol. 290: C1487-1494.
7. Hosokawa, T., et al. 2007. Differentiation of tracheal basal cells to ciliated cells and tissue reconstruction on the synthesized basement membrane substratum *in vitro*. Connect. Tissue Res. 48: 9-18.

PROTOCOLS

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