

Laminin α -1 (G-12): sc-74418

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 and 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.

CHROMOSOMAL LOCATION

Genetic locus: LAMA1 (human) mapping to 18p11.31.

SOURCE

Laminin α -1 (G-12) is a mouse monoclonal 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 IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Laminin α -1 (G-12) is available conjugated to agarose (sc-74418 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-74418 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-74418 PE), fluorescein (sc-74418 FITC), Alexa Fluor® 488 (sc-74418 AF488), Alexa Fluor® 546 (sc-74418 AF546), Alexa Fluor® 594 (sc-74418 AF594) or Alexa Fluor® 647 (sc-74418 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-74418 AF680) or Alexa Fluor® 790 (sc-74418 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

Laminin α -1 (G-12) is recommended for detection of Laminin α -1 of human origin by Western Blotting (starting dilution 1:100, 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).

Suitable for use as control antibody for Laminin α -1 siRNA (h): sc-37125, Laminin α -1 shRNA Plasmid (h): sc-37125-SH and Laminin α -1 shRNA (h) Lentiviral Particles: sc-37125-V.

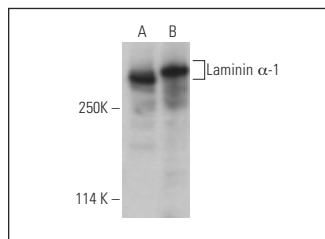
Molecular Weight of Laminin α -1: 356 kDa.

Positive Controls: human testis extract: sc-363781, Caki-1 cell lysate: sc-2224 or HeLa whole cell lysate: sc-2200.

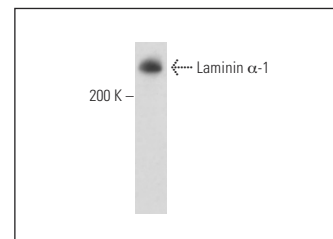
STORAGE

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

DATA



Laminin α -1 (G-12): sc-74418. Western blot analysis of Laminin α -1 expression in Caki-1 whole cell lysate (A) and human testis tissue extract (B). Detection reagent used: m-IgG₁ BP-HRP: sc-525408.



Laminin α -1 (G-12): sc-74418. Western blot analysis of Laminin α -1 expression in Caki-1 whole cell lysate.

SELECT PRODUCT CITATIONS

- Oikawa, Y., et al. 2011. Melanoma cells produce multiple laminin isoforms and strongly migrate on α 5 Laminin(s) via several integrin receptors. *Exp. Cell Res.* 317: 1119-1133.
- Yan, Y., et al. 2018. Laminins in an *in vitro* anterior lens capsule model established using HLE B-3 cells. *Mol. Med. Rep.* 17: 5726-5733.
- Wei, X., et al. 2018. Kojic acid inhibits senescence of human corneal endothelial cells via NF κ B and p21 signaling pathways. *Exp. Eye Res.* 180: 174-183.
- Yan, Y., et al. 2019. Laminin α 4 overexpression in the anterior lens capsule may contribute to the senescence of human lens epithelial cells in age-related cataract. *Aging* 11: 2699-2723.
- Santarella, F., et al. 2020. Scaffolds functionalized with matrix from induced pluripotent stem cell fibroblasts for diabetic wound healing. *Adv. Healthc. Mater.* 9: e2000307.
- Zhou, P.L., et al. 2021. Circular RNA hsa_circ_0000277 sequesters miR-4766-5p to upregulate LAMA1 and promote esophageal carcinoma progression. *Cell Death Dis.* 12: 676.
- Pereira, A.R., et al. 2022. Preservation of the naïve features of mesenchymal stromal cells *in vitro*: comparison of cell- and bone-derived decellularized extracellular matrix. *J. Tissue Eng.* 13: 20417314221074453.
- Hadjisavva, R., et al. 2022. Adherens junctions stimulate and spatially guide integrin activation and extracellular matrix deposition. *Cell Rep.* 40: 111091.
- Paterniti, I., et al. 2023. Trehalose-carnosine prevents the effects of spinal cord injury through regulating acute inflammation and zinc(II) ion homeostasis. *Cell. Mol. Neurobiol.* 43: 1637-1659.

RESEARCH USE

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