

Laminin α -2 (B-4): sc-55605

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 -2 gene is necessary for sustenance of mature muscle cells. The Laminin α -2 gene is associated with congenital muscular dystrophy (CMD) in humans and dystrophia muscularis in mice.

CHROMOSOMAL LOCATION

Genetic locus: LAMA2 (human) mapping to 6q22.33; Lama2 (mouse) mapping to 10 A4.

SOURCE

Laminin α -2 (B-4) is a mouse monoclonal antibody raised against amino acids 2811-2940 mapping near the C-terminus of Laminin α -2 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 -2 (B-4) is available conjugated to agarose (sc-55605 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-55605 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-55605 PE), fluorescein (sc-55605 FITC), Alexa Fluor[®] 488 (sc-55605 AF488), Alexa Fluor[®] 546 (sc-55605 AF546), Alexa Fluor[®] 594 (sc-55605 AF594) or Alexa Fluor[®] 647 (sc-55605 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-55605 AF680) or Alexa Fluor[®] 790 (sc-55605 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

Laminin α -2 (B-4) is recommended for detection of Laminin α -2 of mouse, rat and 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).

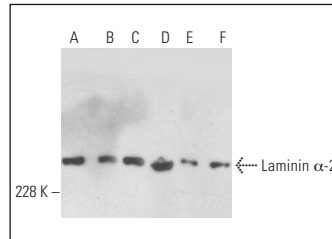
Suitable for use as control antibody for Laminin α -2 siRNA (h): sc-43143, Laminin α -2 siRNA (m): sc-43144, Laminin α -2 shRNA Plasmid (h): sc-43143-SH, Laminin α -2 shRNA Plasmid (m): sc-43144-SH, Laminin α -2 shRNA (h) Lentiviral Particles: sc-43143-V and Laminin α -2 shRNA (m) Lentiviral Particles: sc-43144-V.

Molecular Weight of Laminin α -2: 300 kDa.

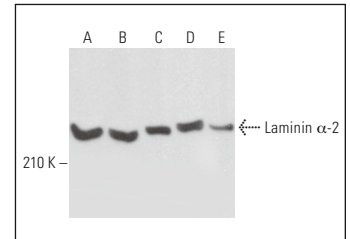
STORAGE

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

DATA



Laminin α -2 (B-4) HRP: sc-55605 HRP. Direct western blot analysis of Laminin α -2 expression in Caki-1 (A), WI-38 (B), PC-12 (C) and HeLa (D) whole cell lysates and rat lung (E) and mouse embryo (F) tissue extracts.



Laminin α -2 (B-4): sc-55605. Western blot analysis of Laminin α -2 expression in Caki-1 (A), WI-38 (B), NIH/3T3 (C) and PC-12 (D) whole cell lysates and rat embryo tissue extract (E).

SELECT PRODUCT CITATIONS

- 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. 2019. Kojic acid inhibits senescence of human corneal endothelial cells via NF κ B and p21 signaling pathways. *Exp. Eye Res.* 180: 174-183.
- Chang, H., et al. 2020. Autophagy and Akt-mTOR signaling display periodic oscillations during torpor-arousal cycles in oxidative skeletal muscle of Daurian ground squirrels (*Spermophilus dauricus*). *J. Comp. Physiol. B* 190: 113-123.
- Jelinkova, S., et al. 2021. Derivation of human pluripotent stem cell line via CRISPR/Cas9 mediated deletion of exon 3 LAMA2 gene (DMBi001-A-1). *Stem Cell Res.* 56: 102529.
- Chen, H.J., et al. 2022. High-fat-diet-induced extracellular matrix deposition regulates integrin-FAK signals in adipose tissue to promote obesity. *Mol. Nutr. Food Res.* 66: e2101088.
- Chen, H.J., et al. 2023. Adipose extracellular matrix deposition is an indicator of obesity and metabolic disorders. *J. Nutr. Biochem.* 111: 109159.
- Sabry, S., et al. 2023. An atypical expression of core α -Dystroglycan and Laminin α -2 in skin fibroblasts of patients with congenital muscular dystrophies. *Mol. Biol. Rep.* 50: 6373-6379.
- Shibahara, T., et al. 2023. PDGFR β -positive cell-mediated post-stroke remodeling of fibronectin and Laminin α -2 for tissue repair and functional recovery. *J. Cereb. Blood Flow Metab.* 43: 518-530.
- Du, M., et al. 2024. RAGE mediates hippocampal pericyte responses and neurovascular unit lesions after TBI. *Exp. Neurol.* 380: 114912.

RESEARCH USE

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

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