

Laminin γ -1 (B-4): sc-13144

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 γ -1 gene maps to chromosome 1q25.3 and is ubiquitously expressed in tissues that produce basement membranes.

CHROMOSOMAL LOCATION

Genetic locus: LAMC1 (human) mapping to 1q25.3; Lamc1 (mouse) mapping to 1 G3.

SOURCE

Laminin γ -1 (B-4) is a mouse monoclonal antibody raised against amino acids 1420-1609 of Laminin γ -1 of human origin.

PRODUCT

Each vial contains 200 μ g IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Laminin γ -1 (B-4) is available conjugated to agarose (sc-13144 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-13144 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-13144 PE), fluorescein (sc-13144 FITC), Alexa Fluor[®] 488 (sc-13144 AF488), Alexa Fluor[®] 546 (sc-13144 AF546), Alexa Fluor[®] 594 (sc-13144 AF594) or Alexa Fluor[®] 647 (sc-13144 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-13144 AF680) or Alexa Fluor[®] 790 (sc-13144 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

Laminin γ -1 (B-4) is recommended for detection of Laminin γ -1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:200-1:1,000), 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).

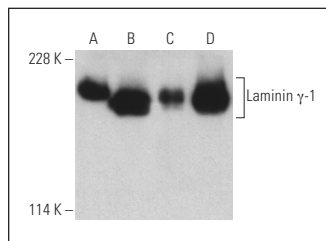
Suitable for use as control antibody for Laminin γ -1 siRNA (h): sc-29388, Laminin γ -1 siRNA (m): sc-35780, Laminin γ -1 shRNA Plasmid (h): sc-29388-SH, Laminin γ -1 shRNA Plasmid (m): sc-35780-SH, Laminin γ -1 shRNA (h) Lentiviral Particles: sc-29388-V and Laminin γ -1 shRNA (m) Lentiviral Particles: sc-35780-V.

Molecular Weight of Laminin γ -1: 200-215 kDa.

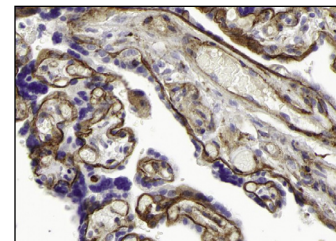
STORAGE

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

DATA



Laminin γ -1 (B-4) HRP: sc-13144 HRP. Direct western blot analysis of Laminin γ -1 expression in HeLa (A), A-431 (B), HUV-EC-C (C) and H4 (D) whole cell lysates.



Laminin γ -1 (B-4): sc-13144. Immunoperoxidase staining of formalin fixed, paraffin-embedded human placenta tissue showing membranous staining of decidual and trophoblastic cells. Kindly provided by The Swedish Human Protein Atlas (HPA) program.

SELECT PRODUCT CITATIONS

- Vafia, K., et al. 2012. Pathogenicity of autoantibodies in anti-p200 pemphigoid. *PLoS ONE* 7: e41769.
- Song, J.J., et al. 2013. Regeneration and experimental orthotopic transplantation of a bioengineered kidney. *Nat. Med.* 19: 646-651.
- Shimizu, A., et al. 2013. Immunoglobulin G deposition to nonhemidesmosomal lamina lucida and early neutrophil involvement are characteristic features in a case of anti-p200 pemphigoid. *Br. J. Dermatol.* 168: 647-655.
- Hirako, Y., et al. 2014. Isolation of a hemidesmosome-rich fraction from a human squamous cell carcinoma cell line. *Exp. Cell Res.* 324: 172-182.
- Guyette, J.P., et al. 2014. Perfusion decellularization of whole organs. *Nat. Protoc.* 9: 1451-1468.
- Otake-Irie, H., et al. 2017. Erythema with nonscarring, tense blister formation without circulating anti-BP180 antibodies. *JAMA Dermatol.* 153: 1185-1186.
- Komatsu-Fujii, T., et al. 2020. Anti-Laminin γ 1 pemphigoid with IgE autoantibodies. *J. Eur. Acad. Dermatol. Venereol.* 34: e276-e278.
- Zacapala-Gómez, A.E., et al. 2020. Integrin subunit β 1 and Laminin γ 1 chain expression: a potential prognostic biomarker in cervical cancer. *Biomark. Med.* 14: 1461-1471.
- Kulkarni, A., et al. 2021. Oncolytic H-1 parvovirus binds to sialic acid on laminins for cell attachment and entry. *Nat. Commun.* 12: 3834.

RESEARCH USE

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

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