

Laminin-5 (P3E4): sc-13587

BACKGROUND

Laminin-5 is a glycoprotein complex of three subunits (Laminin- α 3, - β 3, and - γ 2) that influences cell adhesion (metastasis), signal transduction and keratinocyte differentiation. Laminin-5 localizes to the basal lamina underneath epithelia and mediates the anchoring of basal epithelial cells to the extracellular matrix (ECM). Differential processing of the subunits of the Laminin-5 precursor influences how this protein integrates into the ECM architecture.

CHROMOSOMAL LOCATION

Genetic locus: LAMA5 (human) mapping to 20q13.33.

SOURCE

Laminin-5 (P3E4) is a mouse monoclonal antibody raised against keratinocytes expressing Laminin-5 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-5 (P3E4) is available conjugated to agarose (sc-13587 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-13587 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-13587 PE), fluorescein (sc-13587 FITC), Alexa Fluor[®] 488 (sc-13587 AF488), Alexa Fluor[®] 546 (sc-13587 AF546), Alexa Fluor[®] 594 (sc-13587 AF594) or Alexa Fluor[®] 647 (sc-13587 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-13587 AF680) or Alexa Fluor[®] 790 (sc-13587 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

Laminin-5 (P3E4) is recommended for detection of Laminin-5 of 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)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

Molecular Weight of Laminin-5: 170 kDa.

Positive Controls: A-431 whole cell lysate: sc-2201.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker[™] Molecular Weight Standards: sc-2035, UltraCruz[®] Blocking Reagent: sc-516214 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 m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz[®] Mounting Medium: sc-24941 or UltraCruz[®] Hard-set Mounting Medium: sc-359850.

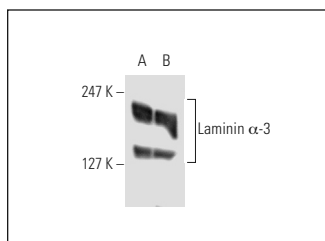
STORAGE

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

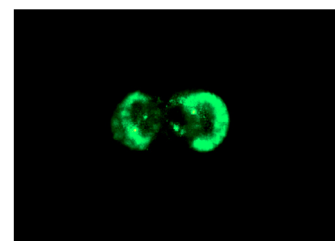
RESEARCH USE

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

DATA



Western blot analysis of Laminin γ -2 subunit of Laminin-5 expression in A-431 conditioned media, immunoprecipitated with Laminin-5 (P3H9-2): sc-13586 (A) and Laminin-5 (P3E4): sc-13587 (B) and detected with Laminin γ -2 (B-2): sc-25341.



Laminin-5 (P3E4): sc-13587. Immunofluorescence staining of methanol-fixed A-431 cells showing cytoplasmic staining.

SELECT PRODUCT CITATIONS

- Woodley, D.T., et al. 2003. Normal and gene-corrected dystrophic epidermolysis bullosa fibroblasts alone can produce type VII collagen at the basement membrane zone. *J. Invest. Dermatol.* 121: 1021-1028.
- Zhang, W., et al. 2010. Three dimensional dental epithelial-mesenchymal constructs of predetermined size and shape for tooth regeneration. *Biomaterials* 31: 7995-8003.
- Ingenito, E.P., et al. 2012. Autologous lung-derived mesenchymal stem cell transplantation in experimental emphysema. *Cell Transplant.* 21: 175-189.
- Hajem, N., et al. 2013. The regulatory role of the tetrapeptide AcSDKP in skin and hair physiology and the prevention of ageing effects in these tissues—a potential cosmetic role. *Int. J. Cosmet. Sci.* 35: 286-298.
- Pei, M., et al. 2014. Expansion on a matrix deposited by nonchondrogenic urine stem cells strengthens the chondrogenic capacity of repeated-passage bone marrow stromal cells. *Cell Tissue Res.* 356: 391-403.
- Fullar, A., et al. 2015. Remodeling of extracellular matrix by normal and tumor-associated fibroblasts promotes cervical cancer progression. *BMC Cancer* 15: 256.
- Han, Y.L., et al. 2020. Cell swelling, softening and invasion in a three-dimensional breast cancer model. *Nat. Phys.* 16: 101-108.
- Li, H., et al. 2021. Nonlinear elasticity of biological basement membrane revealed by rapid inflation and deflation. *Proc. Natl. Acad. Sci. USA* 118: e2022422118.
- He, X., et al. 2022. Lacrimal gland microenvironment changes after obstruction of lacrimal gland ducts. *Invest. Ophthalmol. Vis. Sci.* 63: 14.

PROTOCOLS

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

Alexa Fluor[®] is a trademark of Molecular Probes, Inc., Oregon, USA