# SANTA CRUZ BIOTECHNOLOGY, INC.

# 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  $\alpha$ ,  $\beta$  and  $\gamma$  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  $\gamma$ -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  $\gamma$ -1 (B-4) is a mouse monoclonal antibody raised against amino acids 1420-1609 of Laminin  $\gamma$ -1 of human origin.

#### PRODUCT

Each vial contains 200  $\mu g\, lgG_{2a}$  kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

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

## **APPLICATIONS**

Laminin  $\gamma$ -1 (B-4) is recommended for detection of Laminin  $\gamma$ -1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:200-1:1,000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffinembedded 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  $\gamma$ -1 siRNA (h): sc-29388, Laminin  $\gamma$ -1 siRNA (m): sc-35780, Laminin  $\gamma$ -1 shRNA Plasmid (h): sc-29388-SH, Laminin  $\gamma$ -1 shRNA Plasmid (m): sc-35780-SH, Laminin  $\gamma$ -1 shRNA (h) Lentiviral Particles: sc-29388-V and Laminin  $\gamma$ -1 shRNA (m) Lentiviral Particles: sc-35780-V.

Molecular Weight of Laminin y-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  $\gamma\text{-}1$  (B-4) HRP: sc-13144 HRP. Direct western blot analysis of Laminin  $\gamma\text{-}1$  expression in HeLa (A), A-431 (B), HUV-EC-C (C) and H4 (D) whole cell lysates.

Laminin  $\gamma$ -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

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- 10. Pigors, M., et al. 2024. Anti-Laminin  $\beta$ 4 lgG drives tissue damage in anti-p200 pemphigoid and shows interactions with Laminin  $\alpha$ 3 and  $\gamma$ 1/2 chains. J. Invest. Dermatol. E-published.

#### **RESEARCH USE**

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

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