

# Laminin $\alpha$ -5 (H-160): sc-20145

## 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  $\alpha$ -5 gene maps to chromosome 20q13.33.

## REFERENCES

1. Schnaper, H.W., et al. 1993. Role of laminin in endothelial cell recognition and differentiation. *Kidney Int.* 43: 20-25.
2. Tryggvason, K. 1993. The laminin family. *Curr. Opin. Cell Biol.* 5: 877-882.

## CHROMOSOMAL LOCATION

Genetic locus: LAMA5 (human) mapping to 20q13.33; Lama5 (mouse) mapping to 2 H4.

## SOURCE

Laminin  $\alpha$ -5 (H-160) is a rabbit polyclonal antibody raised against amino acids 1381-1540 mapping within an internal region of Laminin  $\alpha$ -5 of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

Laminin  $\alpha$ -5 (H-160) is recommended for detection of Laminin  $\alpha$ -5 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ 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).

Laminin  $\alpha$ -5 (H-160) is also recommended for detection of Laminin  $\alpha$ -5 in additional species, including equine and bovine.

Suitable for use as control antibody for Laminin  $\alpha$ -5 siRNA (h): sc-43149, Laminin  $\alpha$ -5 siRNA (m): sc-43150, Laminin  $\alpha$ -5 shRNA Plasmid (h): sc-43149-SH, Laminin  $\alpha$ -5 shRNA Plasmid (m): sc-43150-SH, Laminin  $\alpha$ -5 shRNA (h) Lentiviral Particles: sc-43149-V and Laminin  $\alpha$ -5 shRNA (m) Lentiviral Particles: sc-43150-V.

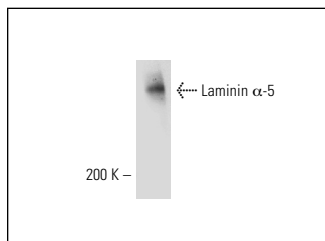
Molecular Weight of Laminin  $\alpha$ -5: 399 kDa.

Positive Controls: JAR cell lysate: sc-2276 or A-431 whole cell lysate: sc-2201.

## STORAGE

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

## DATA



Laminin  $\alpha$ -5 (H-160): sc-20145. Western blot analysis of Laminin  $\alpha$ -5 expression in JAR whole cell lysate.

## SELECT PRODUCT CITATIONS

1. Breitkreutz, D., et al. 2004. Inhibition of basement membrane formation by a nidogen-binding Laminin  $\gamma$ -1 chain fragment in human skin-organotypic cocultures. *J. Cell Sci.* 117: 2611-2622.
2. Akgul, B., et al. 2005. The E7 protein of cutaneous human papillomavirus type 8 causes invasion of human keratinocytes into the dermis in organotypic cultures of skin. *Cancer Res.* 65: 2216-2223.
3. Hosokawa, T., et al. 2007. Differentiation of tracheal basal cells to ciliated cells and tissue reconstruction on the synthesized basement membrane substratum *in vitro*. *Connect. Tissue Res.* 48: 9-18.
4. Tsuji, A., et al. 2007. Engineering of  $\alpha$ 1-antitrypsin variants selective for subtilisin-like proprotein convertases PACE4 and PC6: importance of the P2' residue in stable complex formation of the serpin with proprotein convertase. *Protein Eng. Des. Sel.* 20: 163-170.
5. Chiu, C.C., et al. 2009. Global gene expression profiling reveals a key role of CD44 in hepatic oval-cell reaction after 2-AAF/CCl4 injury in rodents. *Histochem. Cell Biol.* 132: 479-489.
6. Saito, N., et al. 2009. Laminin-421 produced by lymphatic endothelial cells induces chemotaxis for human melanoma cells. *Pigment Cell Melanoma Res.* 22: 601-610.
7. VanderWyst, S.S., et al. 2011. Structural basement membrane components and corresponding integrins in Schlemm's canal endothelia. *Mol. Vis.* 17: 199-209.

## RESEARCH USE

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


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Try **Laminin  $\alpha$ -5 (4B12): sc-130542**, our highly recommended monoclonal alternative to Laminin  $\alpha$ -5 (H-160).