

# Laminin $\gamma$ -2 (B-2): sc-25341

## 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  $\gamma$ -2 gene maps to chromosome 1q25.3 and specifically localizes to epithelial cells in skin, lung and kidney.

## REFERENCES

1. Tryggvason, K. 1993. The laminin family. *Curr. Opin. Cell Biol.* 5: 877-882.
2. Schnaper, H.W., et al. 1993. Role of laminin in endothelial cell recognition and differentiation. *Kidney Int.* 43: 20-25.
3. Engvall, E. and Wewer, U.M. 1996. Domains of laminin. *J. Cell. Biochem.* 61: 493-501.

## CHROMOSOMAL LOCATION

Genetic locus: LAMC2 (human) mapping to 1q25.3.

## SOURCE

Laminin  $\gamma$ -2 (B-2) is a mouse monoclonal antibody raised against amino acids 1011-1193 of Laminin  $\gamma$ -2 of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG<sub>2a</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Laminin  $\gamma$ -2 (B-2) is available conjugated to agarose (sc-25341 AC), 500  $\mu$ g/0.25 ml agarose in 1 ml, for IP.

## APPLICATIONS

Laminin  $\gamma$ -2 (B-2) is recommended for detection of Laminin  $\gamma$ -2 of human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:500), 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), 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  $\gamma$ -2 siRNA (h): sc-35782, Laminin  $\gamma$ -2 shRNA Plasmid (h): sc-35782-SH and Laminin  $\gamma$ -2 shRNA (h) Lentiviral Particles: sc-35782-V.

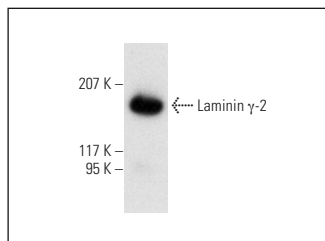
Molecular Weight of Laminin  $\gamma$ -2: 150 kDa.

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

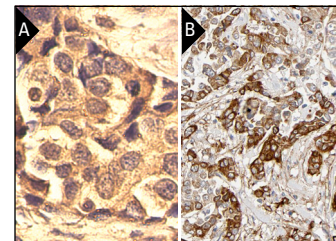
## STORAGE

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

## DATA



Laminin  $\gamma$ -2 (B-2): sc-25341. Western blot analysis of Laminin  $\gamma$ -2 expression in A-431 whole cell lysate.



Laminin  $\gamma$ -2 (B-2): sc-25341. Immunoperoxidase staining of formalin fixed, paraffin-embedded human breast carcinoma tissue showing cytoplasmic and extracellular localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human pancreatic cancer showing cytoplasmic and membrane staining of tumor cells. Kindly provided by The Swedish Human Protein Atlas (HPA) program (B).

## SELECT PRODUCT CITATIONS

1. Kocdor, H., et al. 2009. Human chorionic gonadotropin (hCG) prevents the transformed phenotypes induced by 17  $\beta$ -estradiol in human breast epithelial cells. *Cell Biol. Int.* 33: 1135-1143.
2. Oikawa, Y., et al. 2011. Melanoma cells produce multiple laminin isoforms and strongly migrate on  $\alpha$ 5 laminin(s) via several integrin receptors. *Exp. Cell Res.* 317: 1119-1133.
3. Carey, S.P., et al. 2017. Three-dimensional collagen matrix induces a mechanosensitive invasive epithelial phenotype. *Sci. Rep.* 7: 42088.
4. Chen, J., et al. 2018. Overexpression of  $\alpha$ 3,  $\beta$ 3 and  $\gamma$ 2 chains of laminin-332 is associated with poor prognosis in pancreatic ductal adenocarcinoma. *Oncol. Lett.* 16: 199-210.
5. Sundaram, G.M., et al. 2021. HuR enhances FSTL1 transcript stability to promote invasion and metastasis of squamous cell carcinoma. *Am. J. Cancer Res.* 11: 4981-4993.
6. Berndt, A., et al. 2022. Invasion-associated reorganization of Laminin 332 in oral squamous cell carcinomas: the role of the Laminin  $\gamma$ 2 chain in tumor biology, diagnosis, and therapy. *Cancers* 14: 4903.
7. Choi, S.H., et al. 2022. KRAS mutants upregulate Integrin  $\beta$ 4 to promote invasion and metastasis in colorectal cancer. *Mol. Cancer Res.* 20: 1305-1319.
8. Meloti-Fiorio, L., et al. 2022. Perivascular mast cells and expression of vascular endothelial growth factor, Laminin-332 and matrix metalloproteinase-9 in human colorectal neoplasms. *Rev. Gastroenterol. Mex.* E-published.

## RESEARCH USE

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