SANTA CRUZ BIOTECHNOLOGY, INC.

# Laminin-R (MLuC5): sc-59732

## BACKGROUND

Laminin receptor (Laminin-R) has a heterodimeric structure similar to that of receptors for other extracellular matrix proteins such as Fibronectin and Vitronectin. Incorporation of Laminin-R into lysosomal membranes makes it possible for lysosomes to attach to surfaces coated with Laminin. This and other properties identify Laminin-R as a member of the integrin family of cell adhesion receptors. The Laminin-R precursor is a polypeptide whose expression is consistently upregulated in aggressive carcinoma. The precursor, which is also identified as p40 ribosome-associated protein, appears to be a multifunctional protein involved in the translational machinery. Laminin-R (also known as colon carcinoma Laminin-binding protein) and is found at nine-fold higher levels in colon carcinoma than in adjacent normal colonic epithelium. Additionally, the level of the Laminin-R is higher in the lung cancer cell line than in the lung cell line.

## CHROMOSOMAL LOCATION

Genetic locus: RPSA (human) mapping to 3p22.1; Rpsa (mouse) mapping to 9 F4.

## SOURCE

Laminin-R (MLuC5) is a mouse monoclonal antibody raised against live N592 small cell lung carcinoma cell line of human origin.

## PRODUCT

Each vial contains 200 µg IgM kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Laminin-R (MLuC5) is available conjugated to either phycoerythrin (sc-59732 PE) or fluorescein (sc-59732 FITC), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM.

## APPLICATIONS

Laminin-R (MLuC5) is recommended for detection of Laminin-R of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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 paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and flow cytometry (1 µg per 1 x $10^6$ cells).

Suitable for use as control antibody for Laminin-R siRNA (h): sc-35789, Laminin-R siRNA (m): sc-37262, Laminin-R shRNA Plasmid (h): sc-35789-SH, Laminin-R shRNA Plasmid (m): sc-37262-SH, Laminin-R shRNA (h) Lentiviral Particles: sc-35789-V and Laminin-R shRNA (m) Lentiviral Particles: sc-37262-V.

Molecular Weight of Laminin-R cytosolic precursor: 37 kDa.

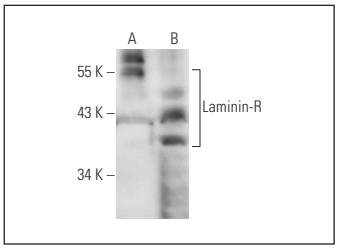
Molecular Weight of mature Laminin-R: 67 kDa.

Positive Controls: PC-3 cell lysate: sc-2220, K-562 whole cell lysate: sc-2203 or MCF7 whole cell lysate: sc-2206.

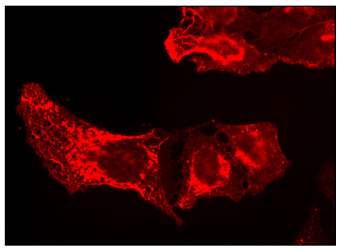
## STORAGE

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

## DATA




Laminin-R (MLuC5): sc-59732. Western blot analysis of Laminin-R expression in MCF7 (**A**) and PC-3 (**B**) whole cell lysates.



Laminin-R (MLuC5): sc-59732. Immunofluorescence staining of methanol-fixed HeLa cells showing membrane localization.

## SELECT PRODUCT CITATIONS


1. Gundimeda, U., et al. 2012. Green tea polyphenols precondition against cell death induced by oxygen-glucose deprivation via stimulation of Laminin receptor, generation of reactive oxygen species, and activation of protein kinase Cε. J. Biol. Chem. 287: 34694-34708.
2. Kim, D.G., et al. 2012. Interaction of two translational components, lysyl-tRNA synthetase and p40/37LRP, in plasma membrane promotes Laminin-dependent cell migration. FASEB J. 26: 4142-4159.
3. Wang, H., et al. 2013. Expression and distribution of Laminin receptor precursor/Laminin receptor in rabbit tissues. J. Mol. Neurosci. 51: 591-601.
4. Gopalakrishna, R., et al. 2013. Methods for studying oxidative regulation of protein kinase C. Methods Enzymol. 528: 79-98.
5. Gundimeda, U., et al. 2014. Green tea catechins potentiate the neuritogenic action of brain-derived neurotrophic factor: role of 67-kDa Laminin receptor and hydrogen peroxide. Biochem. Biophys. Res. Commun. 445: 218-224.
6. Gundimeda, U., et al. 2015. Polyphenols from green tea prevent antineuritogenic action of Nogo-A via 67-kDa Laminin receptor and hydrogen peroxide. J. Neurochem. 132: 70-84.
7. Wang, T., et al. 2017. (-)-Epigallocatechin gallate targets Notch to attenuate the inflammatory response in the immediate early stage in human macrophages. Front. Immunol. 8: 433.
8. Gopalakrishna, R., et al. 2018. Laminin-1 induces endocytosis of 67KDa Laminin receptor and protects Neuroscreen-1 cells against death induced by serum withdrawal. Biochem. Biophys. Res. Commun. 495: 230-237.
9. Gopalakrishna, R., et al. 2022. cAMP-induced decrease in cell-surface Laminin receptor and cellular prion protein attenuates amyloid-β uptake and amyloid-β-induced neuronal cell death. FEBS Lett. E-published.


## RESEARCH USE

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