Laminin-R (H-2): sc-74515

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BIOTECHNOLOGY

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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) 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 (H-2) is a mouse monoclonal antibody raised against amino acids 110-250 mapping within an internal region of Laminin-R of human origin.

PRODUCT

Each vial contains 200 µg IgG$_1$ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Laminin-R (H-2) is available conjugated to agarose (sc-74515 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-74515 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-74515 PE), fluorescein (sc-74515 FITC), Alexa Fluor® 488 (sc-74515 AF488), Alexa Fluor® 546 (sc-74515 AF546), Alexa Fluor® 594 (sc-74515 AF594) or Alexa Fluor® 647 (sc-74515 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-74515 AF680) or Alexa Fluor® 790 (sc-74515 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

Laminin-R (H-2) is recommended for detection of Laminin-R of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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 solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

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.

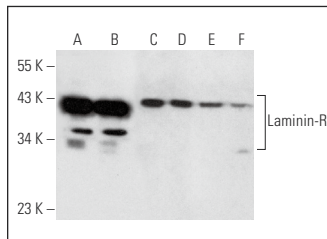Molecular Weight of Laminin-R cytosolic precursor: 37 kDa.

Molecular Weight of mature Laminin-R: 67 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, NIH/3T3 whole cell lysate: sc-2210 or AMJ2-C8 whole cell lysate: sc-364366.
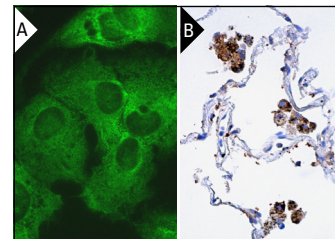
STORAGE

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

DATA

Laminin-R (H-2): sc-74515. Western blot analysis of Laminin-R expression in Jurkat (**A**), SHP-77 (**B**), NIH/3T3 (**C**), AMJ2-C8 (**D**), KNRK (**E**) and RBL-1 (**F**) whole cell lysates.

Laminin-R (H-2): sc-74515. Immunofluorescence staining of formalin-fixed Hep G2 cells showing cytoplasmic localization (**A**). Immunoperoxidase staining of formalin-fixed, paraffin-embedded human lung tissue showing cytoplasmic staining of macrophages (**B**).

SELECT PRODUCT CITATIONS

1. Linge, A., et al. 2011. Bleomycin treatment of A549 human lung cancer cells results in association of MGr1-Ag and caveolin-1 in lipid rafts. Int. J. Biochem. Cell Biol. 43: 98-105.

2. Bürger, S., et al. 2020. Pigment epithelium-derived factor (PEDF) receptors are involved in survival of retinal neurons. Int. J. Mol. Sci. 22: 369.

3. Akiba, J., et al. 2021. The expression of PEDF and its putative receptors in hepatocellular carcinoma and background liver tissue. Anticancer Res. 41: 1203-1212.

4. Jiang, H., et al. 2021. Caveolae/rafts protect human cerebral microvascular endothelial cells from *Streptococcus suis* serotype 2 α-enolase-mediated injury. Vet. Microbiol. 254: 108981.

5. Papagiannopoulos, C.I., et al. 2022. Invariable ribosome stoichiometry during murine erythroid differentiation: implications for understanding ribosomopathies. Front. Mol. Biosci. 9: 805541.

6. Garcia-Marques, F., et al. 2022. Protein signatures to distinguish aggressive from indolent prostate cancer. Prostate 82: 605-616.

7. Papagiannopoulos, C.I., et al. 2022. Invariable ribosome stoichiometry during murine erythroid differentiation: implications for understanding ribosomopathies. Front. Mol. Biosci. 9: 805541.

8. Garcia-Marques, F., et al. 2022. Protein signatures to distinguish aggressive from indolent prostate cancer. Prostate 82: 605-616.

RESEARCH USE

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

PROTOCOLS

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

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