For life science research only.
Not for use in diagnostic procedures.

Laminin
from Engelbreth-Holm-Swarm (EHS) sarcoma (mouse)

Version: 17
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Cat. No. 11 243 217 001 1 mg
2 ml

Store product at −15 to −25°C.

1. General Information

1.1. Contents

Vial / Bottle	Label	Function / Description	Content
1	Laminin	▪ 0.5 mg/ml solution in 0.15 M NaCl, 2 mM EDTA, 0.05 M Tris-HCl, pH 7.4. ▪ Filtered through 0.2 mm pore size membrane.	1 bottle, 1 mg (2 ml)

1.2. Storage and Stability

Storage Conditions (Product)

When stored at −15 to −25°C, the product is stable through the expiration date printed on the label.

Vial / Bottle	Label	Storage
1	Laminin	Store at −15 to −25°C or at +2 to +8°C for at least 3 months.

1.3. Additional Equipment and Reagent required

For coating of cell culture vessels

- Basal medium without serum
- Microscope

1.4. Application

Laminin in known to be involved in many different applications:

- Promotes the attachment and growth of a variety of cells, such as human carcinoma, sarcoma, and retinoblastoma cells, liver cells, and murine neuroblastoma and embryonal carcinoma cells.
- Responsible for many types of cell-basement membrane interactions, such as adhesion, migration, and proliferation.
- Promotes the adhesion of many epithelial cell types to type IV collagen, including normal as well as tumor cells, and other cells bearing basement membranes, such as myoblasts or Schwann cells.
- Induces morphologic changes, such as cell spreading, elongation, or neurite outgrowth in cell culture.
- Serves as an attachment factor for epithelial and endothelial cells.

2. How to Use this Product

2.1. Before you Begin

General Considerations

Primary structure

Mouse laminin is composed of three polypeptide chains (A: 400 kDa, B1: 230 kDa, and B2: 220 kDa) connected by disulphide bridges, and is glycosylated.

Working Solution

Preparation of Laminin working solution

1. Thaw Laminin solution carefully at +15 to +25°C.
   After thawing, the Laminin solution may contain some visible fibers. The presence of visible fibers does not have any effect on the behavior or function of the Laminin in the cell culture.

2. Remove the required amount under sterile conditions and store Laminin solution at +2 to +8°C.
   Do not refreeze.

3. Prepare working dilutions with basal medium, without serum.
   – Several examples are shown in the following table:

Concentration [µg/ml]	Coating [µg/cm$^{2]}$	Dilution
20	2	40 µl Laminin solution (0.5 mg/ml) with 960 µl basal medium.
50	5	100 µl Laminin solution (0.5 mg/ml) with 900 µl basal medium.

2.2. Protocols

Coating of cell culture vessels

See section, Working Solution for additional information on preparing solutions.

1. For each cm^2 surface to be coated, add 100 µl diluted Laminin solution, for example, add 1 ml to a 35 mm dish (10 cm^2).

2. Incubate vessels for 45 minutes in an incubator and then add cells suspended in culture medium in the desired plating density.
   – Alternatively, the diluted Laminin solution may be aspirated, and then the cell suspension added. In this case, the working dilution may be prepared with PBS.

3. Monitor attachment and spreading of the cells under a microscope, for example, for HT-1080 cells (human fibrosarcoma cells), after 30 minutes.
   The optimal Laminin concentration may vary with the cell type and has to be determined experimentally.

2.3. Parameters

Biological Activity

Tested for the promotion of adherence of HT-1080 cells (human fibrosarcoma cells).

Molecular Weight

900 kDa

Purity

Laminin (as laminin-nidogen complex, 1:1) is ≥90% pure as determined by SDS-PAGE.

Specificity

Mouse laminin is active on most mammalian cells, such as human, mouse, rat, rabbit, and also, for example, chicken and fish cells.

Working Concentration

Use 2 to 5 µg/cm^2 for the coating of cell culture vessels.

3. Additional Information on this Product

3.1. Test Principle

Laminin is the major non-collagenous glycoprotein of basement membranes. It is composed of two B-chains (B1: 230 kDa, B2: 220 kDa) and one A-chain (400 kDa) held together by disulphide bonds forming a large cross-shaped molecule.

Preparation

Laminin is purified as a laminin-nidogen complex from mouse Engelbreth-Holm-Swarm (EHS) sarcoma.

4. Supplementary Information

4.1. Conventions

To make information consistent and easier to read, the following text conventions and symbols are used in this document to highlight important information:

Text convention and symbols	
Information Note: Additional information about the current topic or procedure.	
Important Note: Information critical to the success of the current procedure or use of the product.	
① ② ③ etc.	Stages in a process that usually occur in the order listed.
❶ ❷ ❸ etc.	Steps in a procedure that must be performed in the order listed.
* (Asterisk)	The Asterisk denotes a product available from Roche Diagnostics.

4.2. Changes to previous version

Layout changes.
Editorial changes.

4.3. Trademarks

All product names and trademarks are the property of their respective owners.

4.4. License Disclaimer

For patent license limitations for individual products please refer to:
List of biochemical reagent products.

4.5. Regulatory Disclaimer

For life science research only. Not for use in diagnostic procedures.

4.6. Safety Data Sheet

Please follow the instructions in the Safety Data Sheet (SDS).

4.7. Contact and Support

To ask questions, solve problems, suggest enhancements or report new applications, please visit our **Online Technical Support Site**.

To call, write, fax, or email us, visit **sigma-aldrich.com**, and select your home country. Country-specific contact information will be displayed.

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Roche Diagnostics GmbH
Sandhofer Strasse 116
68305 Mannheim
Germany