Certificate of Analysis

LAMININ - ULTRAPURE, MOUSE

Laminin a major structural component of basement membranes, is a glycoprotein composed of three polypeptide chains with a multi-domain structure.[1] Laminin has many and varied functions that are mediated by binding to various components of the basement membrane. As a cell attachment factor it promotes neurite outgrowth and influences Schwann cell[2] and olfactory neuron[3] migration, growth, morphology, and adhesion, functions important in tissue repair. Laminin is also involved in the growth of mammary cells, hepatocytes, neutrophils,[4] melanoma cells,[4] neurons,[4-8], rat skeletal muscle,[5] carcinoma cells,[9,10] and ras-transformed cells.[11] In additional to providing structural support for cells, laminin also serves as a growth factor, regulating the physiology of its overlying cells, e.g., epidermal keratinocytes.[12] Laminin also influences the oxidative burst in human neutrophils,[13] inhibits the responses of lymphocytes to T cell mitogens,[14] regulates the responses of embryonic carcinoma cells to growth factor,[15] plays a role in epithelial cell polarity,[16] and may be used in tumor cell invasion studies.[17] Laminin as multiple biologically active sites in its three polypeptide chains, including the pentapeptides IKVAV in the A chain and YIGSR in the B1 chain, as well as an RGD side in the A chain.[18] A number of laminin-binding cellular proteins have been characterized, including a variety of cell surface integrins that mediate the interactions of cells with laminin.[19] This product is a highly purified laminin preparation that is free of entactin. Entactin is a 150 kD protein tightly bound to laminin, serving as a bridge between laminin and collagen IV. Laminin is isolated from the Englebreth-Holm-Swarm mouse tumor and is used as a thin coating on tissue culture plastic.

CATALOG NUMBER:	354239	LOT NUMBER: _____
SOURCE:	Engelbreth-Holm-Swarm mouse tumor	
QUANTITY:	1 milligram, in _____ milliliter, frozen.	
FORMULATION:	0.05 M Tris-HC1, 0.15 M NaCl, pH7.4	
USE:	Laminin is generally used in the concentration range of 1-10 micrograms per cm^2 of growth surface. Guidelines for determining the optimal coating concentration are described on the back of this sheet. If entire amount of material is not to be used immediately, transfer aliquot to sterile plastic tubes and store at -70°C. **DO NOT STORE IN FROST-FREE FREEZER. AVOID MULTIPLE FREEZE-THAWS**	
MOLECULAR WEIGHT:	900 kD	
QUALITY CONTROL:	≥95% by SDS-PAGE The biological activity of ultrapure laminin is determined in a cell culture neurite outgrowth assay. NG-108 (mouse neuroblastoma/rat glioma) cells differentiated and formed neurites when plated on this lot of laminin. Laminin is a membrane filtered (0.2 micron) preparation and has been tested for the presence of bacteria, fungi and mycoplasma.	
STORAGE:	Stable when stored at -70°C. Avoid multiple freeze-thaws. Do not store in frost-free freezer. **KEEP FROZEN.**	
EXPIRATION DATE:		

Discovery Labware, Inc., Two Oak Park, Bedford, MA 01730, Tel: 1.978.442.2200 (U.S.)
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Coating Procedure

Use the following as guidelines to determine the optimal coating conditions for your culture system.

1. Thaw ultrapure laminin slowly, at 2-8^{o}C or on ice. Keep stock of laminin at 2-8^{o} C during use. Flocculent material may develop during thawing; this material (aggregated laminin) usually goes into solution after 1-48 hours at 2-8^{o}C.

2. Dilute laminin to desired concentration using sterile, serum-free culture medium. Suggested coating concentration is 1-10 ug/cm^{2}. The final solution should be sufficiently dilute so that the amount added to the coating surface will coat it evenly.

   Example: For a final coating concentration of 5 ug/cm^{2}, dilute material to 50 ug/ml and add 1 ml/35 mm dish, 3 ml/60 mm dish, etc.

3. Add appropriate amount of diluted laminin to culture surface.

4. Incubate at room temperature for 1 hour.

5. Aspirate remaining material.

6. Rinse plates carefully -- avoid scraping bottom surface.

7. Plates are ready for use. They may also be stored at 2-8^{o}C damp or air dried if sterility is maintained.

_____ _____

Quality Assurance **Date**

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For research use only. Not for use in diagnostic or therapeutic procedures.

LOT NUMBER: