Certificate of Analysis

LAMININ, 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] Laminin is isolated from the Englebreth-Holm-Swarm mouse tumor and is used as a thin coating on tissue culture plastic.

CATALOG NUMBER:	354232	LOT NUMBER: _____
SOURCE:	Engelbreth-Holm-Swarm mouse tumor	
QUANTITY:	1 milligram, at _____ milligram per milliliter, frozen.	
FORMULATION:	0.05 M Tris/0.15 M NaCl, pH 7.4	
RECONSTITUTION AND USE:	Laminin is generally used in the concentration range of 1-10 ug/cm^2 of growth surface. Please see reverse for coating directions. If entire amount of material is not to be used immediately, transfer aliquots to sterile plastic tubes and store at -70°C. It is recommended that solubilized product is used within 1 month. **DO NOT STORE IN FROST-FREE FREEZER. AVOID REPEATED FREEZE THAWS.**	
MOLECULAR WEIGHT:	900,000 Daltons	
QUALITY CONTROL:	The biological activity of laminin is determined in a cell culture assay. NG-108 (mouse neuroblastoma/rat glioma) cells differentiated and formed neurites when plated on this lot of laminin. ≥90% by SDS PAGE Laminin is a membrane filtered (0.2 μm) preparation, and is 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:

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For Research Use Only. Not for use in diagnostic or therapeutic procedures.

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Coating Procedure

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

1. Thaw laminin slowly, at 4°C or on ice. Keep stock of laminin at 4°C during use. Flocculent material may develop during thawing; this material (aggregated laminin) usually goes into solution after 1-48 hours at 4°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 4°C damp or air dried if sterility is maintained.

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