BACKGROUND

Laminins are essential and abundant structural non-collagenous glycoproteins localizing to basement membranes. Basement membranes (cell-associated extracellular matrices, or ECMs) are polymers of Laminins with stabilizing type IV collagen networks, nidogen, and several proteoglycans. Basement membranes are found under epithelial layers, around the endothelium of blood vessels and surrounding muscle, peripheral nerve and fat cells. Formation of basement membranes influences cell proliferation, phenotype, migration, gene expression and tissue architecture. Each Laminin is a heterotrimer of α, β and γ chain subunits that undergoes cell-secretion and incorporation into the ECM. Laminins can self-assemble and bind to other matrix macromolecules, and have unique and shared cell interactions mediated by integrins, dystroglycan and cognate Laminin receptors.

REFERENCES


PRODUCT

Laminin is purified from Engelbreth-Holm-Swarm (EHS) lathyritic mouse tumor (>90%) by SDS PAGE; supplied as 1 mg, frozen, in 0.05M Tris/0.15 M NaCl, pH 7.4.

Laminin is generally used as a thin coating in the concentration range of 1-10 µg/cm² of growth surface. Recommended coating protocols are provided as guidelines only; each laboratory should empirically determine the optimal conditions for their unique applications.

Laminin is a membrane filtered (0.2 µm) preparation, and has been tested for the presence of bacteria, fungi and mycoplasma. The biological activity of this product has been determined in a cell culture assay. NG-108 (mouse neuroblastoma/rat glioma) cells differentiated and formed neurites when plated on this lot of Laminin.

Molecular Weight of Laminin: 900 kDa glycoprotein composed of three poly-peptide chains.

RECOMMENDED COATING PROTOCOL

- Dilute Laminin to desired concentration using sterile, serum-free culture medium. Recommended coating concentration is 1-10 µg/cm². The final solution should be sufficiently dilute so that the volume added to the coating surface will coat it evenly (e.g., for a final coating concentration of 5 µg/cm², dilute material to 50 µg/ml and add 1 ml/35 mm dish, 3 ml/60 mm dish, etc.).
- Add appropriate amount of diluted Laminin to culture surface.
- Incubate at room temperature for one hour.
- Aspirate remaining material.
- Rinse plates carefully; avoid scraping bottom surface.
- Plates may be used immediately or may be stored at 4° C, damp or air dried, if sterility is maintained.

STORAGE AND RECONSTITUTION

Stable for a minimum of three months from the date of shipment when stored at -70° C.

To use, thaw product 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.

If entire amount of material is not to be used immediately, transfer aliquots to sterile plastic tubes and store at -70° C.

Solubilized product should be used within one month. **DO NOT STORE IN FROST-FREE FREEZER. AVOID MULTIPLE FREEZE-THAW CYCLES**.

RESEARCH USE

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