

PRODUCT DESCRIPTION

Laminins are extracellular matrix glycoproteins and major structural components of basement membranes (1,2,3). Laminin I molecule is composed of three polypeptide chains: α 1, β 1 and γ 1 subunits, that are covalently linked together by disulfide bonds. The molecular weights for the subunits are 400 kDa, 210 kDa, and 200 kDa, respectively, resulting in 810 kDa for the assembled protein (4). Laminin I has binding sites for other Laminin I molecules, collagen IV, glycosylaminoglycans (GAGs), and integrin/non-integrin cell surface receptors (5). It forms large polymer networks that function in the assembly and organization of the basement membrane (6). Laminin I promotes adhesion, migration, growth, and differentiation of various types of cells (7,8).

INTENDED USE

Cultrex Antibiotic-free Mouse Laminin I is used as a substrate for cell culture adhesion. Optimal conditions for its attachment must be determined for each cell line and application. The recommended working concentration is 0.5-10 $\mu\text{g}/\text{cm}^2$ of growth surface (0.5-20 $\mu\text{g}/\text{mL}$) depending on cell type, experimental needs, and required analysis.

PRODUCT SPECIFICATIONS

Concentration	1 mg/mL
Source	Murine Engelbreth-Holm-Swarm (EHS) tumor.
Storage Buffer	Dulbecco's Modified Eagle's Medium.
Stability	Product is stable for a minimum of 3 months from date of shipment. See lot specific Certificate of Analysis for expiration date.
Storage	Store at $\leq -70^\circ\text{C}$. Product may be thawed and dispensed into working aliquots. Avoid freeze-thaw cycles.

PRECAUTION

When handling bio-hazardous materials such as human cells, safe laboratory procedures should be followed and protective clothing should be worn.

LIMITATIONS

- FOR LABORATORY RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES.
- The safety and efficacy of this product in diagnostic or other clinical uses has not been established.
- Results may vary due to variations among tissue/cells derived from different donors or sources.

MATERIAL QUALIFICATIONS

Sterility Testing:

- PathClear – Tested negative by PCR test for a total of 31 organisms and viruses, including: mycoplasma, 17 bacterial and virus strains typically included in mouse antibody production (MAP) testing, and 13 additional murine infectious agents including LDEV.
- Tested following USP <71> sterility guidelines.
- Endotoxin concentration < 20 EU/mL by LAL assay.

Functional Assays:

- Supports the attachment of MG63 osteosarcoma cells at < 20 µg/mL.

COATING PROCEDURE

The recommended working concentration is 0.5-10 µg/cm² of growth surface (0.5-20 µg/mL) depending on cell type, experimental needs, and required analysis.

1. Thaw Cultrex Antibiotic-free Mouse Laminin I at 2-8 °C and place it on ice.
2. Dilute Cultrex Antibiotic-free Mouse Laminin I to desired concentration in cold serum-free medium.
3. Pipette the appropriate amount of solution into each well of the tissue culture plate (Table 1). Spread the solution to completely cover the bottom of the wells.

Plate Type	Cultrex Antibiotic-Free Mouse Laminin I (Volume/well)
6 wells (or 35 mm dish)	1-1.5 mL/well
12 wells	500-600 µL/well
24 wells	250-300 µL/well
48 wells	150 µL/well
96 wells	50 µL/well

Table 1: Suggested plating volumes for Cultrex Antibiotic-Free Mouse Laminin I plate-coating.

4. Incubate the plate at 37 °C for one hour or overnight.
5. Aspirate Cultrex Antibiotic-free Mouse Laminin I solution and immediately plate cells. **Do not allow coated surface to dry out.**

REFERENCES

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