



CULTREX[®] Product Data

For Research Use Only. Not For Use In Diagnostic Procedures

Cultrex[®] Stem Cell Qualified Laminin I, PathClear[®]

Catalog #: 3400-010-03

Size: 1 mg

Description: Cultrex[®] Stem Cell Qualified Laminin I provides a functionally defined and effective feeder-free surface for the attachment and maintenance of embryonic stem cells in a pluripotent state (fig 1), thereby enabling its use for growth promotion or study of stem cell differentiation. This highly purified preparation of mouse Laminin I is composed of $\alpha 1\beta 1\gamma 1$ chains with a total Mr of 800,000.

Specifications:

<u>Source:</u>	Murine Engelbreth-Holm-Swarm (EHS) tumor.
<u>Storage Buffer:</u>	Dulbecco's Modified Eagle's Medium with 10 $\mu\text{g}/\text{ml}$ gentamicin sulfate.
<u>Storage:</u>	Store at -20°C or -80°C in a manual defrost freezer.
<u>Purity:</u>	Purity >90% by SDS-PAGE.
<u>Concentration:</u>	~1 mg/ml

Sterility Testing:

- No bacterial or fungal growth detected after incubation at 37°C for 14 days following USP XXIV, Chapter 71 sterility testing.
- PathClear[®]: Negative by PCR test for: mycoplasma, 17 bacterial and virus strains typically included in mouse antibody production (MAP) testing, plus 13 additional murine infectious agents including LDEV, for a total of 31 organisms and viruses.
- Endotoxin concentrations < 20 EU/ml by LAL assay.

Material Qualification:

- Promotes the attachment of H9 human embryonic stem cells.
- Effectively maintains human embryonic stem cells in a pluripotent state as evidenced by intracellular staining for the stem cell markers Oct-4 and Nanog.

Coating procedure for Stem Cell Propagation:

The recommended working concentration is 10 $\mu\text{g}/\text{cm}^2$ of growth surface depending on cell type.

1. Thaw Laminin I on ice for several hours.
2. In a laminar flow hood, dilute to 100 $\mu\text{g}/\text{ml}$ with cold serum-free cell culture medium.
3. Mix and transfer to the wells of tissue culture plates. Spread the solution to completely cover the bottom of the wells.
4. Incubate coated object at room temperature for an hour.
5. Aspirate coating solution and immediately plate cells. Do not allow coated surface to dry out.

The following table is a guide for the suggested volumes required per well:

Plate type/ 6 wells (or 35 mm dish)	Volume Laminin per Well
24 wells	1 ml
48 wells	0.5 ml
96 wells	100 μ l
	50 μ l

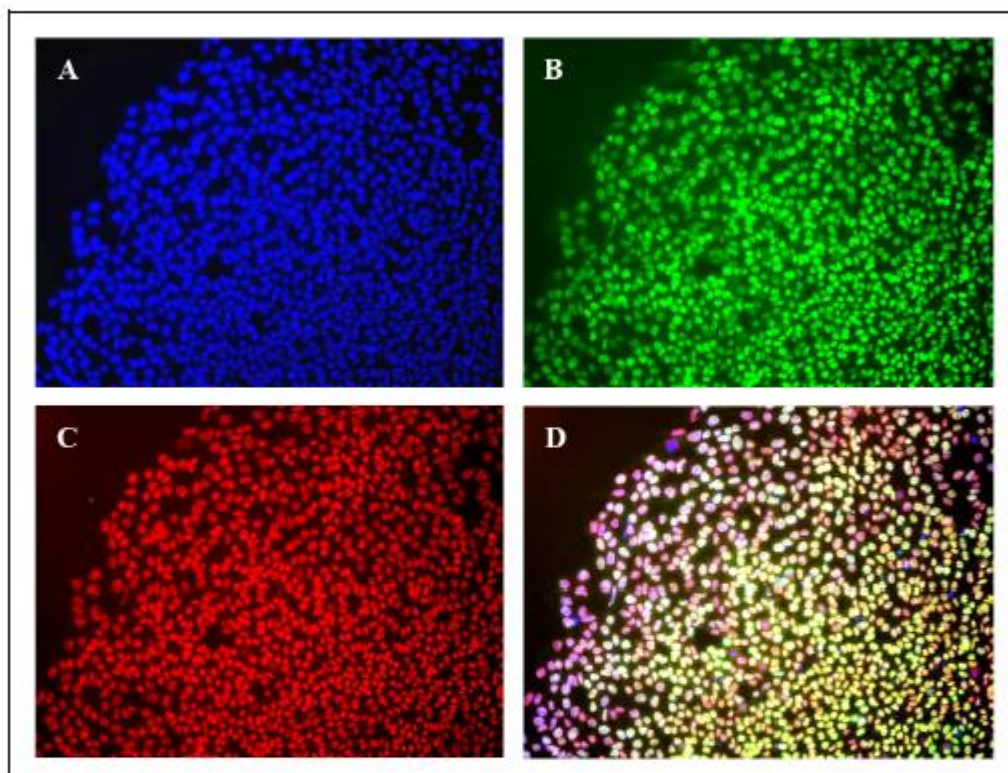


Fig.1. H9 human embryonic stem cells after three passages on Cultrex[®] Stem Cell Qualified Laminin I, PathClear[®] maintain expression of the non-differentiated stem cell markers Oct-4 (B) and Sox2 (C). Nuclear staining by DAPI shown on panel (A) and merged image shown on panel (D).

Images courtesy of the Yanik lab, MIT <http://www.rle.mit.edu/bbng>

Related Products:

Catalog#	Description	Size
3434-005-02	Cultrex [®] Stem Cell Qualified BME, Growth Factor Reduced PathClear [®]	5 ml
3415-001-03	Cultrex [®] Stem Cell Qualified Human BME, PathClear [®]	1 ml
3420-001-03	Cultrex [®] Stem Cell Qualified Human Fibronectin, PathClear [®]	1 mg
3421-001-03	Cultrex [®] Stem Cell Qualified Human Vitronectin, PathClear [®]	200 μ g

References:

1. Kleinman H.K. 1999. The Laminins. Proc. Indian Acad. Sci. (Chem.Sci.), 111:179-184.
2. Xu C., Inokuma M.S., Denham J., Golds K., Kundu P., Gold, J. D., et al. 2001. Feeder-free growth of undifferentiated human embryonic stem cells. Nature Biotechnology 19:971-5.



**Stem Cell Qualified
Laminin I**

Cat #: 3400-010-03

Lot #: 23277F11

Storage: ≤ -20 °C

(Manual Defrost Freezer)

1-800-873-8443

Lot Specific Data:

Protein Concentration: 1.1 mg/ml
Endotoxin: 0.18 EU/ml

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