Geltrex™ hESC-Qualified, Ready-To-Use, Reduced Growth Factor Basement Membrane Matrix

Catalog Number A1569601

Pub. No. MAN0008349 Rev. D

WARNING! Read the Safety Data Sheets (SDSs) and follow the handling instructions. Wear appropriate protective eyewear, clothing, and gloves. Safety Data Sheets (SDSs) are available from **thermofisher.com/support**.

Product description

Geltrex™ hESC-Qualified, Ready-To-Use, Reduced Growth Factor Basement Membrane Matrix (Geltrex™ Matrix) is used routinely for attachment and maintenance of human embryonic stem cells (hESCs). Human ESCs have specific needs and some lots may not support hESC propagation.

Geltrex™ Matrix gels at 37°C to form a reconstituted basement membrane. Basement membranes are continuous sheets of specialized extracellular matrices that form an interface between endothelial, epithelial, muscle, or neuronal cells and their adjacent stroma. Geltrex™ Matrix is a soluble form of basement membrane purified from the Engelbreth-Holm-Swarm (EHS) tumor.

The major components of the Basement Membrane Matrix include laminin, collagen IV, entactin, and heparin sulfate proteoglycan. The solution is formulated without phenol red to minimize potential for estrogen-like effects. Geltrex™ Matrix has been tested to support hESC growth and pluripotency, therefore eliminating the need for customers to test multiple lots.

Contents and storage

Cat. No.	Amount	Storage	Shelf life[1]
A1569601	50 mL	2–8°C. Protect from light.	18 months

[1] Shelf life duration is determined from the date of manufacture.

Procedural guidelines

- Perform all procedures in an aseptic environment, using aseptic techniques, to prevent contamination.
- **Source—**Murine Engelbreth-Holm-Swarm (EHS) tumor (protein concentration ranges from 12–18 mg/mL). Geltrex™ hESC-Qualified Ready-To-Use matrix is provided as a 1:100 dilution (0.12-0.18 mg/mL) in a buffered solution that can be added directly to cell culture plates for coating. See the Certificate of Analysis for specific lot information.
- Geltrex™ matrix will begin to gel if kept above 15°C for extended periods of time. Remove the necessary volume for use, then promptly store the remainder at 2–8°C. Since smaller volumes warm more quickly, partial tubes and aliquots should be kept on ice during use to prevent premature gelling.
- Do not freeze.

Coat the growth surface for propagation of hESC

1. Add sufficient Geltrex™ Matrix solution to cover the entire growth surface area. See Table 1 for recommended volumes.

   We do not recommend diluting the product any further prior to this step.

   IMPORTANT! It is critical to maintain a working temperature of 2–8°C by placing the Geltrex™ Matrix solution on ice to avoid premature gelling.

2. Incubate the coated vessel at 37°C for a minimum of 60 minutes.

   The coated vessel is stable for at least 1 week when wrapped with Parafilm™ sealing film and stored at 2–8°C.

   IMPORTANT! Do not allow the coated surface to dry out.

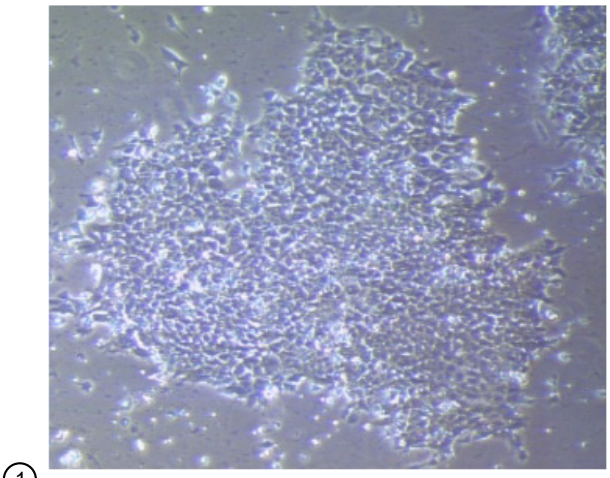
3. At the time of use, we recommend keeping the vessels at room temperature for 1 hour before aspirating. Carefully aspirate off the supernatant above the Geltrex™ Matrix coating, then immediately plate cells in the pre-equilibrated cell culture medium.

Table 1 Reagent volumes (mL)

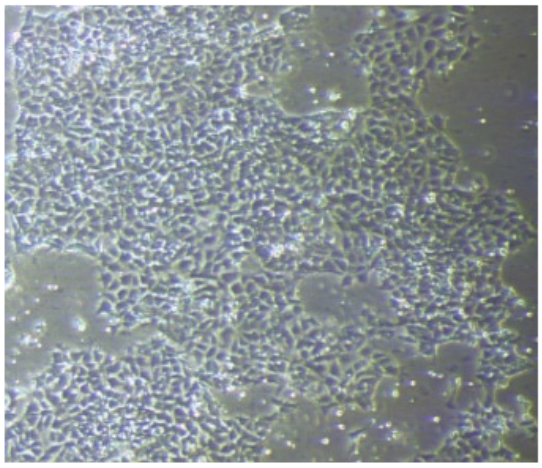
Culture vessel (approx. surface area)	Geltrex™ Matrix
6-well plate (10 cm^2/well)	1.5 mL
12-well plate (4 cm^2/well)	0.6 mL
24-well plate (2 cm^2/well)	0.3 mL
35 mm dish (10 cm^2)	1.5 mL
60 mm dish (20 cm^2)	3 mL
100 mm dish (60 cm^2)	6 mL
T25 flask (25 cm^2)	3.75 mL
T75 flask (75 cm^2)	11.25 mL

Lot qualification

12-well cell culture plates were coated with each test lot of Geltrex™ hESC-Qualified, Ready-To-Use, Reduced Growth Factor Basement Membrane Matrix. Human ESCs were grown on coated control and test plates in StemPro™ hESC SFM, then monitored for expansion. An hESC negative control was grown with retinoic acid to induce differentiation, and was used as an internal PCR control (see Figure 1). After completion of the hESC Growth Assay, the test and control samples were assessed by PCR analysis (see Figure 2).



①



②

Figure 1 hESC Growth Assay

① Human ESC control
② Human ESC negative control

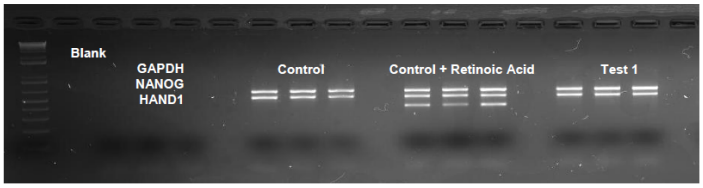


Figure 2 PCR analysis

Related products

Product	Cat. No.
StemPro™ hESC SFM	A1000701
UltraPure™ 0.5M EDTA, pH 8.0	15575020
TrypLE™ Select Enzyme (1X), no phenol red	12563011
KnockOut™ Serum Replacement	10828010
GlutaMAX™ Supplement	35050061
StemPro™ EZPassage™ Disposable Stem Cell Passaging Tool	23181010

Limited product warranty

Life Technologies Corporation and its affiliates warrant their products as set forth in the Life Technologies' General Terms and Conditions of Sale at **www.thermofisher.com/us/en/home/global/terms-and-conditions.html**. If you have questions, contact Life Technologies at **www.thermofisher.com/support**.

Life Technologies Corporation | 3175 Staley Road | Grand Island, New York 14072 USA

For descriptions of symbols on product labels or product documents, go to thermofisher.com/symbols-definition.

Revision history: Pub. No. MAN0008349 D

Revision	Date	Description
D	19 September 2024	Updated Shelf life to 18 months. The version numbering was changed from a numerical format to a letter-based format in accordance with internal document control procedures.
3.0	5 September 2023	Updated Procedural guidelines.
2.0	10 December 2021	• The document was updated to the current document template, with associated updates to the limited license information,warranty, trademarks, and logos. • The following statement was added to the document: "Manufactured under license by Trevigen, Inc." • The section for the explanation of symbols and warnings was removed.
1.0	18 June 2013	Baseline for this revision history.

The information in this guide is subject to change without notice.

DISCLAIMER: TO THE EXTENT ALLOWED BY LAW, THERMO FISHER SCIENTIFIC INC. AND/OR ITS AFFILIATE(S) WILL NOT BE LIABLE FOR SPECIAL, INCIDENTAL, INDIRECT, PUNITIVE, MULTIPLE, OR CONSEQUENTIAL DAMAGES IN CONNECTION WITH OR ARISING FROM THIS DOCUMENT, INCLUDING YOUR USE OF IT.

Important Licensing Information: This product may be covered by one or more Limited Use Label Licenses. By use of this product, you accept the terms and conditions of all applicable Limited Use Label Licenses.