

MigraPrep™ ECM

Extracellular matrix for cell culture

EL001 / EL001S

Instruction manual

MigraPrep™ ECM

Extracellular matrix for cell culture

Catalog number	Pack size
EL001	50 tests (50 × 150 mm culture dishes)
EL001S	10 tests (10 × 150 mm culture dishes)

Important: This kit is designed for scientific research and is not intended for clinical diagnosis. Read the detailed risk and liability statement in this manual before using the product.

Product overview

This reagent promotes migrasome production by cultured cells in vitro for subsequent in situ observation or migrasome isolation.

In 2017, Professor Li Yu's laboratory at Tsinghua University found that binding between cell-surface integrins and the extracellular matrix (ECM) is an important requirement for migrasome formation (Wu D. et al., 2017). Extracellular matrix F, produced by Migrasome Therapeutics, mimics ECM to promote cell adhesion to the substrate and increase migrasome production.

Kit contents

Component	EL001 (50 tests)	EL001S (10 tests)
Extracellular matrix F	1.5 mL	300 µL
Instruction manual	1 copy	1 copy

Reagents supplied by the user

1. Cell culture reagents and consumables, including trypsin and culture dishes.
2. Sterile 1× PBS.

Storage and shipping

Shipping temperature: 4°C. Store at -20°C on receipt. Shelf life: 12 months.

Procedure

1. Prepare the coating solution at an extracellular matrix F:PBS ratio of 1:300. Determine the optimal concentration for the cells used. Add the volume specified below and incubate at 37°C for at least 1 h.

Dish diameter (cm)	Coating solution (mL)
15	9.00
10	4.00
6	1.44
3.5	0.49

2. Prepare the required number of cells in advance. Aspirate the coating solution and seed the cells in the dishes at the required density.

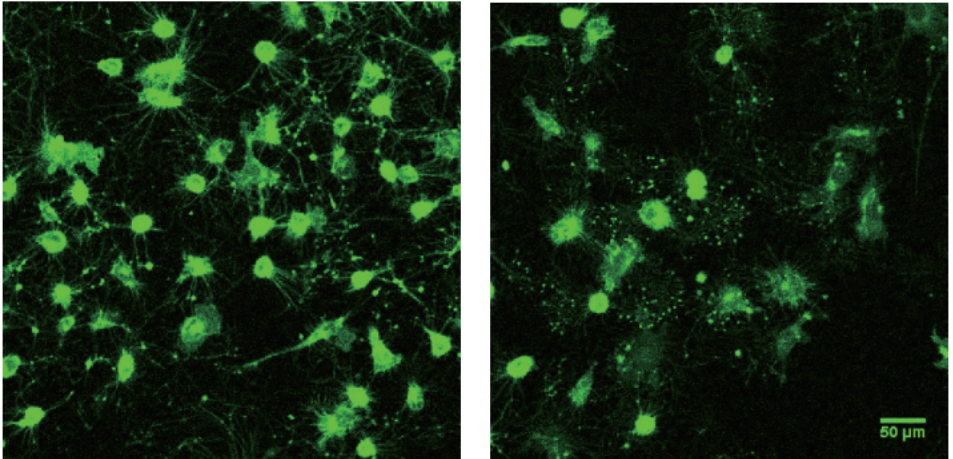
Determine the optimal density for migrasome isolation in advance. This density should be substantially lower than the optimal density for routine cell culture. See Precaution 2.

3. Incubate overnight under the appropriate cell culture conditions.

Determine the optimal cell culture conditions in advance. See Precaution 3.

Example results

Fluorescence microscopy



Migrasomes produced in situ using this reagent at 1:1,000 (left) and 1:300 (right). Cells were seeded in 6-well plates precoated with the reagent at these dilutions and imaged by confocal microscopy after 16 h. The 1:300 dilution promoted migrasome production more strongly than 1:1,000.

Left: 1:1,000 dilution. Right: 1:300 dilution. Scale bar: 50 μm .

Precautions

1. Migratory cell lines and primary cells can produce migrasomes. The ability to produce migrasomes depends on the cells and must be evaluated experimentally. Adherent cells with strong migratory capacity are recommended, including cells whose adhesion and migration increase after overexpression of Tspan4 or other genes that promote migrasome formation. Suspension cells are not recommended, although extracellular matrix coating or gene editing may be tested to promote adhesion. Before routine migrasome production, in situ WGA staining and microscopic examination of migrasome formation are recommended.
2. Migrasomes form during cell migration, so cultures should not be too dense. Based on our experience, aim for 20%-40% confluence at harvest, taking cell migration speed into account. Use a lower density for faster-moving cells.
3. Control the migrasome production time carefully. Incubation that is too short or too long reduces production efficiency. Based on our experience, the recommended production time is approximately 12-16 h.
4. Migrasome production depends on interactions between the cell surface and the culture substrate. Yield may vary with the extracellular matrix and cell type. Optimize the detachment method: insufficient detachment leaves migrasomes behind and reduces yield, whereas excessive digestion or pipetting increases the risk of cell disruption and reduces sample purity.

Important risk and liability statement

This kit is for research use only and has been designed and manufactured in accordance with applicable standards and regulatory requirements for research reagents. Read the product manual carefully before use. Users must comply with all applicable biosafety, legal, ethical and privacy requirements, including, but not limited to, the following:

1. Compliance: This product must not be used for clinical diagnosis, treatment or any other medical purpose.
2. Biosafety: Take appropriate biosafety precautions to prevent infection and strictly follow procedures for handling and storing biohazardous materials.
3. Ethics and privacy: Sample collection must comply with all relevant ethical review standards, protect personal privacy and be covered by appropriate informed consent.
4. Cross-contamination: Follow this manual to prevent sample cross-contamination and ensure accurate experimental results.
5. Storage and stability: Store the kit correctly to maintain its stability and effectiveness. Failure to follow the storage instructions may impair performance.
6. Waste disposal: Dispose of used reagents and samples safely in accordance with local regulations.
7. Product performance limitations: Product performance and limitations are described in this manual. The company accepts no responsibility for use outside these instructions.

The company accepts no legal liability for any direct or indirect consequences of improper use of this product or failure to comply with applicable regulations. Contact customer service with any questions or requests for further information.

Contact information

Beijing Migrasome Therapeutics Co., Ltd.

Address: 4th Floor, Building 2, No. 9 Yiliaoyuan Road, Changping District, Beijing, China

Postal code: 102200

Telephone: 010-53671078

Email: service@migrasome.com

Website: www.migrasome.com