Реагенты для обнаружения, очистки и профилактики микоплазмы, базальные матрицы Swe Matrigel

Технические характеристики

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Servicebio® Mycoplasma Detection Kit（PCR）

Cat. #：G1900

Product information

Product name	Cat. No.	Spec.
Mycoplasma Detection Kit（PCR）	G1900-50T	50 T

Descirption/Introduction

Mycoplasma contamination will cause adverse effects on all aspects of cells, and has become a highly valued problem in cell culture. Therefore, it is very necessary to regularly detect mycoplasma contamination. This mycoplasma detection kit uses PCR method to specifically detect mycoplasma contamination in various cultured cell biological materials (such as cell cultures, secretions of experimental animals, animal serum, etc.). The mixed primers used in the kit are specific primers designed for the conserved region of the 16S rRNA sequence of Mycoplasma. The specific PCR amplification of Mycoplasma DNA can be completed within one hour with the matching Mycoplasma PCR Mix (2×) using cell culture solution as the PCR template. This kit has high sensitivity and can detect as little as 20 copies of mycoplasma.

Storage and Handling Conditions

Ship with wet ice; Stored at -20℃, valid for 12 months.

Component

Component Number	Component	G1900-50T
G1900-1	*Mycoplasma* PCR Mix（2×）	1 mL
G1900-2	*Mycoplasma* Primer Mix	200 μL
G1900-3	Positive Control	50 μL
G1900-4	*Mycoplasma* Free Water	1 mL
Manual		1 pc

Assay Protocol / Procedures

1. **Prepare the sample:** Appropriate amount of cell culture supernatant to be tested was taken into a clean PCR tube. This PCR tubes was heat-treated at 95°C for 5 min in PCR instrument, and used it as a template. Serum samples could be diluted with *Mycoplasma* Free Water, and appropriate samples were placed in a clean PCR tube. This PCR tubes was heat-treated at 95°C for 5 min in PCR instrument, and used it as a template. ;
2. **Prepare the PCR reactions:** Negative control (replace 1 μL of sample with the same amount of Mycoplasma Free Water) and positive control (add 0.5 μL Positive Control to 1 μL sample as Template) shall be set for each experiment. Wear disposable masks and gloves during the experiment, and operate with caution to prevent improper introduction of exogenous mycoplasma contamination;

Component	Volume
Template	1 μL
Mycoplasma Primer Mix	2 μL
Mycoplasma PCR Mix（2×）	10 μL
Mycoplasma Free Water	To 20 μL

3. **Setting up the PCR program:**

Step	Temperature	Time	Cycles
Initial Denaturation	98℃	2 min	1
Denaturation	98℃	20 s	35
Annealing	56℃	25 s	
Extension	72℃	10 s	
Final extension	72℃	5 min	1
Hold	4-16℃	Forever	

4. **Gel electrophoresis:** Take 10 μL PCR product and use 1% agarose gel for electrophoresis detection.
5. **Analyze the results:** In each experiment, the Mycoplasma contamination of the samples by comparing with the results of negative control and positive control. The positive band size was about 500 bp. If there are bands in the negative control test results, it is likely to be contamination in the PCR system, and it is suggested to confirm the results again. If necessary, PCR products can also be routinely sequenced to identify specific mycoplasma species.

Note:

1. This kit can detect *M. orale*, *M. arginini*, *M. bovis*, *M. fermentans*, *M. gallisepticum*, *M. hominis*, *M. pirum*, *Ureaplasma spp*, *M. hyorhinis*, *M. pneumoniae*, *A. laidlawii* and other at least 11 kinds of mycoplasma contamination.
2. All reagents should be thawed and mixed thoroughly on ice before using, and stored at -20℃ after used.
3. Negative controls and positive controls must be set for each experiment, and the experimental group recommends setting sample template gradients.
4. Masks must be worn during the operation, and PCR operation standards must be strictly followed to prevent the introduction of exogenous pollution from affecting the experimental results.
5. In order to ensure the reliability and stability of cell experiments, it is recommended that mycoplasma contamination be detected regularly.
6. For your safety and health, please wear lab coat and disposable gloves.

Servicebio® Mycoplasma Detection Kit（Luminescent）

Cat. #：G1901

Product information

Product name	Cat. No.	Spec.
Mycoplasma Detection Kit（Luminescent）	G1901-20T	20 T

Descirption/Introduction

This mycoplasma detection kit is designed by using the activity of the specific enzyme in Mycoplasma. This enzyme can decompose the specific substrate in mycoplasma detection reagent and convert ADP into ATP. Luciferase catalyzes the oxidation of luciferin in the presence of ATP to produce biological fluorescence. It can be determined by chemiluminescence instrument to reflect whether the sample to be tested is contaminated by mycoplasma. The whole detection process is simple, only needs two steps, and takes about 15 minutes. This method has high sensitivity and detects Mycoplasma with real biological activity, so the detection result is more accurate than PCR.

Storage and Handling Conditions

Ship with wet ice; Stored at -20℃, Mycoplasma Detection reagent A need to keep away from light, valid for 12 months.

Component

Component Number	Component	G1901-20T
G1901-1	Mycoplasma Detection reagent A	1 ml
G1901-2	Mycoplasma Detection reagent B	1 ml
Manual		1 pc

Assay Protocol / Procedures

1. Take an appropriate amount (1 ml is enough) of cell supernatant cultured for 3-6 days, centrifuge 400 g for 3 min to remove a small amount of floating cells or debris. Take the supernatant and test it immediately, or store it at 4 ℃ for one week, or -80 ℃ for half a year;
2. Balance all test reagents and test samples to room temperature, and the most suitable temperature is 20-25 ℃;
3. Add 50 μL of the sample to be tested, a negative control (e.g., sterile water or PBS) to a 96-well plate (non-transparent plate, a special 96-well white plate is recommended);
4. Add 50μL Mycoplasma Detection reagent A, gently mix it, do not produce bubbles, and keep it away from light at room temperature (20-25 ℃) for 5 minutes. Then the chemiluminescence detection is carried out with an enzyme marker with chemiluminescence detection, and the reading of the meter is A. (Please adjust the corresponding parameters according to the sensitivity of the instrument, and the detection time of each well is generally 0.25-1 s);
5. Add 50μL mycoplasma detection reagent B, gently mix it, do not produce bubbles, and keep it away from light at room temperature (20-25 ℃) for 10 minutes. Then the chemiluminescence detection is carried out with an enzyme marker with chemiluminescence detection, and the reading of the meter is B. (Note: please

test in strict accordance with 10 minutes after adding Mycoplasma test reagent B. It should not be carried out in advance or delayed, otherwise it will affect the judgment of results);

6. Calculate ratio = read value A/ read value B.

A. If B/A>1.1, it indicates that there is mycoplasma contamination in the cell culture;

B. If B/A<0.9, there is no mycoplasma contamination in the cell culture;

7. If the B/A ratio is between 0.9-1.1, it is recommended to continue to culture cells for 24-48 hours, and then test again to determine whether there is mycoplasma contamination. If the b/a ratio is still between 0.9-1.1, the cell culture is not contaminated by Mycoplasma and is Mycoplasma negative.

Note:

1. Mycoplasma detection reagent A contains luciferase, which will be gradually inactivated by repeated freezing and thawing. It is suggested that it should be properly sub packaged and stored after the first thawing, and the sub packaged container should be clean and pollution-free.

2. The use of white or black opaque 96-well plates is strongly recommended for testing, as the use of ordinary transparent 96-well plates may cause interference with neighboring wells.

3. The surface of human skin is rich in ATP. Please wear experimental gloves and masks when testing. Other consumables should also be clean and pollution-free to prevent ATP pollution from external sources.

4. For your safety and health, please wear experimental clothes and disposable gloves.

Servicebio®One-step Rapid Mycoplasma Detection Kit (Isothermal Amplification Method)

Cat. #：G1902

Product Information

Product Name	Cat.No.	Spec.
One-step Rapid Mycoplasma Detection Kit (Isothermal Amplification Method)	G1902-50	50 rxns
	G1902-100	100 rxns

Description/Introduction

The kit can quickly detect eight kinds of mycoplasma in cell culture medium by isothermal amplification technique and visual color change. Without DNA extraction, 1 μL cell culture supernatant was directly added to the reaction solution and 30 min was reacted at 65°C. The color of the positive sample changed from yellow to red, and the whole process does not need PCR instrument or open lid to electrophoresis, which can effectively avoid the cross contamination caused by aerosol. Compared with the traditional PCR method, this product has the advantages of simple operation, high sensitivity, and can tolerate a variety of PCR inhibitors in the culture medium, so there is no false negative phenomenon, and the detection results are highly consistent with qPCR.

Storage and Handling Conditions

Shipped with wet ice and stored at -20°C; valid for up to 12 months.

Product Contents

Component Number	Component	G1902-50	G1902-100
1902-1	Mycored Buffer	1.2 mL	1.2 mL×2
1902-2	Mycored Enzyme	50 μL	100 μL
1902-3	Positive Control	50 μL	100 μL
1902-4	Paraffin Oil	1 mL	1 mL×2
Manual		One copy	

a：Contains chromogenic agents.

Before starting (please read carefully)

Set up 65°C water bath or metal heating block in advance.

Assay Protocol / Procedures

1. Sample preparation to be tested:

a. Adherent cells: Absorb the supernatant directly. It is suggested that the samples should be taken when the cell inoculation or liquid change is more than 3 days and the confluence degree is about 90%. At this time, the content of mycoplasma in the supernatant is high and can be easily detected.

b. Suspension cells: The supernatant was obtained after centrifugation at 1,000 rpm for 5 min. It is suggested that the samples should be taken after cell inoculation or fluid change for more than 3 days, when the content of mycoplasma in the cell culture medium is high and can be easily detected.

2. Reaction system

Component	25 μL
Mycored Buffer	23 μL
MycoRed Enzyme	1 μL

a: Mycored Buffer is used upside down after thawing.

b: According to the number of samples, after the above reaction system is prepared, sub-pack it into the reaction tube, add 20 μL of Paraffin Oil, and then proceed to the next step.

3. Add samples

a. Negative control: No sample was added to the first reaction tube as a negative control.

b. Positive control: 1 μL Positive Control was added to the last reaction tube as positive control.

c. Sample to be tested: Add 1 μL cell culture supernatant to the rest of the reaction tube.

a: Please extend the head of the pipette tips under the liquid level of paraffin oill to add samples.

4. Reaction condition

Transfer the reaction tube to a preheated 65 ℃ water bath or metal bath to incubate 30min. If the color development is not obvious the reaction time can be extended to 40 min.

Result determination

Take out the reaction tube immediately after the end of the reaction, and if the reaction solution is still yellow after it is restored to room temperature, the result will be negative. If the reaction solution turns red, the result is positive. The reaction tube should not be opened, otherwise it will easily lead to aerosol pollution.

Negative Positive

Note

1. Do not open the reaction tube after the reaction is over.
2. It is suggested that the pipette tips with filter element should be used in the process of preparing reaction solution, and the discarded pipette tips and reaction tube should be put into the self-sealing bag and dealt with in time.
3. Please use nucleic acid scavenger (recommended G3020) to wipe the test bench and pipette frequently.

Servicebio® Mycoplasma Detection Kit (Probe qPCR)

Cat. No.: G1903

Product Information

Product Name	Cat. No.	Spec.
Mycoplasma Detection Kit (Probe qPCR)	G1903-50	50 rxns
	G1903-100	100 rxns

Product Description/Introduction

This product is based on Taqman probe method to detect 8 common mycoplasma contaminations in cell culture and other biological materials, which is characterized by simple operation, high sensitivity and high specificity.Detectable samples are supernatants from cell cultures performed 3-6 days after inoculation; If the samples are cell suspensions or in the presence of qPCR inhibitors, DNA needs to be extracted before the reaction is performed. This kit also provides PositiveControl, which can be added to the sample before the qPCR reaction to prevent false negative results if you are unsure whether the sample contains a qPCR inhibitor.

Storage and Shipping Conditions

Ship with wet ice; Store at -20℃ away from light for 12 months.

Product Content

Component Number	Component	G1903-50	G1903-100
G1903-1	2×Myco Universal Blue qPCR Master Mix	500 μL	1 mL
G1903-2	Myco Primers & Probe Mix	60 μL	120 μL
G1903-3	Positive Control	50 μL	100 μL
Manual		1 pc	

Pre-experiment preparation

1. Real Time PCR Amplifier.
2. qPCR tube or plate for experiments.

Assay Protocol / Procedures

1. **Sample Preparation:**

   Adherent cells: If commonly used cell culture medium is used, 1 μL of medium supernatant can be taken and added directly to the qPCR reaction system when cells are inoculated or changed for more than 3 days.

   Suspension cells: DNA needs to be extracted, then qPCR reaction.

   Reaction Inhibitors: If qPCR inhibitors are present in the cell culture solution, DNA needs to be extracted before performing the qPCR reaction.

2. **Suggested qPCR reaction system:**

Component	20 μL rxn
2×Myco Universal Blue qPCR Master Mix[a]	10 μL
Myco Primer & Probe Mix	1.2 μL
Sampla[b]	1 μL
Nuclease-Free Water	Add to 20 μL

a. The ROX Reference Dye is not included in the qPCR Master Mix, when setting up the qPCR program, select the ROX channel as None; if you need to add the ROX Reference Dye, please purchase the 50×

ROX Reference Dye and use it at a final concentration of 1×.

b. If you are not sure whether the sample contains qPCR inhibitors, add 0.5 μL of Positive Control to the qPCR reaction system at the same time as adding the sample; If Negative Control is required, the sample can be replaced with Nuclease-Free Water or without any template.

3. **qPCR reaction program (can be adjusted appropriately according to the model):**

A. Two-step method				
Stage	**Step**	**Cycle**	**Temperature**	**Time**
Stage 1	premutability	1	95℃	30 sec
Stage 2	denaturation	40	95℃	15 sec
	Annealing/Extension		60℃	30 sec[a]
B. Three-step method				
Stage	**Step**	**Cycle**	**Temperature**	**Time**
Stage 1	premutability	1	95℃	30 sec
Stage 2	denaturation	40	95℃	15 sec
	Annealing		55-65℃	10 sec
	Extension		72℃	30 sec[a]

To improve amplification specificity, use a two-step program or increase the annealing temperature;

To improve amplification efficiency, use a three-step program or extend the extension time.

4. **qPCR reaction parameters:**

The reporter fluorescent moiety is FAM and the quenching fluorescent moiety is None selected.

Note

1. After thawing the reagent, mix it upside down gently before use. Do not swirl and mix it to avoid bubbles.
2. When preparing the reaction solution, keep the reagents on ice.
3. Please use new disposable tips for preparation and dispensing of reaction solution to avoid contamination between samples as much as possible.
4. Avoid repeated freezing and thawing and try to use it within one month after thawing.
5. For your health and safety, please wear lab coat and gloves during operation.

Compatible Models

ABI: 5700, 7000, 7300, 7700, 7900, 7900HT, 7900 HT Fast, StepOne™, StepOne Plus™, 7500/7500 Fast, ViiA 7 ™, QuantStudio™, PikoRealTM Cycler;
Stratagene: Mx3000P®, 3005P™, 4000™;
Bio-Rad: CFX96™, CFX384™, iCycler iQ™, iQ5™, MyiQ™, MiniOpticon™, Opticon®, Opticon 2, Chromo4™;
Eppendorf: Realplex 2s, Mastercycler® ep, realplex;
Illumina: Eco QPCR
Cepheid: SmartCycler®
Qiagen Corbett: Rotor-Gene®
Roche: LightCycler™
Takara: Thermal Cycler Dice
Analytikjena: qTOWER
qTOWER: LineGene

Servicebio® Mycoplasma Elimination Reagent (100×)

Cat. #：G4006-10ML

Product Information

Product Name	Cat. No	Spec.
Mycoplasma Elimination Reagent (100×)	G4006-10ML	10 mL

Product Description/Introduction

The product can be used to eliminate mycoplasma that is commonly present in cell cultures. It is composed of antibiotics of quinolones and tetracyclines, which interfere with mycoplasma DNA replication and protein synthesis, respectively. This reagent works at low concentrations, intoxicant to eukaryotic cells. Mycoplasma in cell culture medium can be effectively removed about 10 days after the supplement of this reagent.

Storage and Shipping Conditions

Ship with wet ice; store at -20℃, avoid freeze -thaw cycles, valid for 12 months.

Product Contents

Component	G4006-10ML
Mycoplasma Elimination Reagent (100×)	10×1 mL
Manual	One copy

Assay Protocol / Procedures

1. Add 1 mL of Mycoplasma Elimination Reagent (100×) to 100 mL of cell medium (containing serum, without double antibiotic) and mix well.
2. If cells are contaminated with mycoplasma, cultivate cells in culture medium supplemented with Mycoplasma Elimination Reagent for one week.
3. Planting some cells into 6-well plates (or other standard culture vessels) and cultured with normal culture medium. The remaining cells are continued to be cultured with medium containing Mycoplasma Elimination Reagent.
4. Cells in 6-well plates are cultured with normal culture medium for 2-3 days, and mycoplasma detection (recommended G1900, G1901, G1902). is performed when the cell confluence reach more than 90%.
5. According to the test result, perform the following operations:

   A) Positive result: continue to repeat steps 3-4 until the test result is negative.

   B) Negative results: the cell group containing Mycoplasma Elimination Reagent medium is replaced with normal complete medium, and Mycoplasma detection is performed after a period of culture; A negative retest indicates that mycoplasma elimination is complete.

Note

1. Avoid repeated freezing and thawing. If you need to use multiple times, please pay attention to appropriate packaging. In addition, if there is crystallization or precipitation after thawing, vortex or reverse mixing can promote crystallization or precipitation dissolution, without affecting the use effect.

2. This product has been tested in a variety of mycoplasma infected cell lines, but different cell lines have different sensitivity to reagents. If the cytotoxicity is too great or the removal effect is not good, the solubility of the product can be adjusted appropriately, and other scavenger can be selected (recommend G4007, G4008).
3. It is recommended to add mycoplasma prevention reagent (recommend G4009) in cell cultures 同 prevent mycoplasma contamination.
4. For cells that have been identified as mycoplasma contamination, a separate ultra-clean bench should be used to avoid cross-contamination.
5. For your safty and health, please wear safety glasses, gloves, or protective clothing.

Attached Table: Features of Mycoplasma Removal Series

Product Name	Mycoplasma Elimination Reagent (100×)	Mycoplasma Elimination Reagent Plus (100×)	Mycoplasma Elimination Reagent (SweMyco-1+2) (100×)
Product Code	G4006	G4007	G4008
Composition	Quinolones、Tetracycline	Quinolones, Tetracyclines, Macrolides	Quinolones, Tetracyclines, Macrolides
Relative toxicity	Middle	High	Low
Clear speed	About 10 days	5-7 days	About 7 days
Ease of use	Easy	Easy	More complicated

For Research Use Only!

Servicebio® Mycoplasma Elimination Reagent Plus (100×)

Cat. #：G4007-10ML

Product Information

Product Name	Cat. No	Spec.
Mycoplasma Elimination Reagent Plus (100×)	G4007-10ML	10 mL

Product Description/Introduction

The product can be used to eliminate mycoplasma that is commonly present in cell cultures. It is composed of antibiotics of quinolones and tetracyclines, which interfere with mycoplasma DNA replication and protein synthesis, respectively. This reagent works at low concentrations, intoxicant to eukaryotic cells.. Mycoplasma in cell culture medium can be effectively removed about 10 days after the supplement of this reagent.

Storage and Shipping Conditions

Ship with wet ice; store at -20℃, avoid freeze -thaw cycles, valid for 12 months.

Product Contents

Component	G4006-10ML
Mycoplasma Elimination Reagent Plus (100×)	10×1 mL
Manual	One copy

Assay Protocol / Procedures

1. Add 1 mL of Mycoplasma Elimination Reagent Plus (100×) to 100 mL of cell medium (containing serum, without double antibiotic) and mix well.
2. If cells are contaminated with mycoplasma, cultivate cells in culture medium supplemented with Mycoplasma Elimination Reagent Plus for one week.
3. Planting some cells into 6-well plates (or other standard culture vessels) and cultured with normal culture medium. The remaining cells are continued to be cultured with medium containing Mycoplasma Elimination Reagent Plus.
4. Cells in 6-well plates are cultured with normal culture medium for 2-3 days, and mycoplasma detection (recommended G1900, G1901, G1902). is performed when the cell confluence reach more than 90%.
5. According to the test result, perform the following operations:

   A) Positive result: continue to repeat steps 3-4 until the test result is negative.

   B) Negative results: the cell group containing Mycoplasma Elimination Reagent medium is replaced with normal complete medium, and Mycoplasma detection is performed after a period of culture; A negative retest indicates that mycoplasma elimination is complete.

Note

1. Avoid repeated freezing and thawing. If you need to use multiple times, please pay attention to appropriate packaging. In addition, if there is crystallization or precipitation after thawing, vortex or reverse mixing can promote crystallization or precipitation dissolution, without affecting the use effect.

2. This product has been tested in a variety of mycoplasma infected cell lines, but different cell lines have different sensitivity to reagents. If the cytotoxicity is too great or the removal effect is not good, the solubility of the product can be adjusted appropriately, and other scavenger can be selected (recommend G4008).
3. It is recommended to add mycoplasma prevention reagent (recommend G4009) in cell cultures 同 prevent mycoplasma contamination..
4. For cells that have been identified as mycoplasma contamination, a separate ultra-clean bench should be used to avoid cross-contamination.
5. For your safty and health,please wear safety glasses, gloves, or protective clothing.

Attached Table: Features of Mycoplasma Removal Series

Product Name	Mycoplasma Elimination Reagent (100×)	Mycoplasma Elimination Reagent Plus (100×)	Mycoplasma Elimination Reagent (SweMyco-1+2) (100×)
Product Code	G4006	G4007	G4008
Composition	Quinolones、Tetracycline	Quinolones, Tetracyclines, Macrolides	Quinolones, Tetracyclines, Macrolides
Relative toxicity	Middle	High	Low
Clear speed	About 10 days	5-7 days	About 7 days
Ease of use	Easy	Easy	More complicated

For Research Use Only!

Servicebio® Mycoplasma Elimination Reagent (SweMyco-1+2) (100×)

Cat. #：G4008-5ML

Product Information

Product Name	Cat. No	Spec.
Mycoplasma Elimination Reagent (SweMyco-1+2) (100×)	G4008-5ML	5 mL

Product Description/Introduction

The product can be used to eliminate mycoplasma that is commonly present in cell cultures. It is composed of antibiotics of quinolones and tetracyclines, which interfere with mycoplasma DNA replication and protein synthesis, respectively. This optimized reagent is not only intoxicant to eukaryotic cells, but also effectively remove mycoplasma in cell culture medium about 10 days.

Storage and Shipping Conditions

Ship with wet ice; store at -20℃, avoid freeze -thaw cycles, valid for 12 months.

Product Contents

Component Number	Component	G4008-5ML
G4008-1	SweMyco Elimination Reagent-1 (100×)	5×1 mL
G4008-2	SweMyco Elimination Reagent-2 (100×)	5×1 mL
Manual		One copy

Assay Protocol / Procedures

1. Preparation of medium A: Add 1 mL **SweMyco Elimination Reagent-1 (100×)** to 100 mL cell media (containing serum, without double antibiotic), and mix well.
2. Preparation of medium B: add 1 mL **SweMyco Elimination Reagent 2 (100×)** to 100 mL cell media (containing serum, without double antibiotic), and mix well.
3. If cells are contaminated with mycoplasma, cultivate cells in culture medium A for 4 days. And then the cells are conventionally cultured for 3 days with medium B.
4. Planting some cells into 6-well plates (or other standard culture vessels) and cultured with normal culture medium. The remaining cells are continued to be cultured with medium A and B alternately.
5. Cells in 6-well plates are cultured with normal culture medium for 2-3 days, and mycoplasma detection (recommended G1900, G1901, G1902). is performed when the cell confluence reach more than 90%.
6. According to the test result, perform the following operations:
7. A) Positive result: continue to repeat steps 3-5 until the test result is negative.
8. B) Negative results: the cell group containing Mycoplasma Elimination Reagent medium is replaced with normal complete medium, and Mycoplasma detection is performed after a period of culture; A negative retest indicates that mycoplasma elimination is complete.

Note

1. This product has been tested in a variety of mycoplasma infected cell lines, but different cell lines have different sensitivity to reagents. If the cytotoxicity is too great or the removal effect is not good, the concentration of the product can be adjusted appropriately, or extend the removal time.
2. It is recommended to add mycoplasma prevention reagent (recommend G4009) in cell cultures 同 prevent mycoplasma contamination.
3. For cells that have been identified as mycoplasma contamination, a separate ultra-clean bench should be used to avoid cross-contamination.
4. For your safty and health,please wear safety glasses, gloves, or protective clothing.

Attached Table: Features of Mycoplasma Removal Series

Product Name	**Mycoplasma Elimination Reagent (100×)**	**Mycoplasma Elimination Reagent Plus (100×)**	**Mycoplasma Elimination Reagent (SweMyco-1+2) (100×)**
Product Code	G4006	G4007	G4008
Composition	Quinolones、Tetracycline	Quinolones, Tetracyclines, Macrolides	Quinolones, Tetracyclines, Macrolides
Relative toxicity	Middle	High	Low
Clear speed	About 10 days	5-7 days	About 7 days
Ease of use	Easy	Easy	More complicated

For Research Use Only!

Servicebio® Mycoplasma Prevention Reagent (1,000×)

Cat. #：G4009-1ML

Product Information

Product Name	Cat. No	Spec.
Mycoplasma Prevention Reagent (1000×)	G4009-1ML	1 mL

Product Description/Introduction

The product is a mycoplasma inhibitor composed of antibiotics of quinolones, tetracyclines and macrolides which effectively interfere with mycoplasma DNA replication and protein synthesis. It can also inhibit Gram-negative and positive bacteria, and can be used as a substitute for Penicillin-Streptomycin in cell culture.

Storage and Shipping Conditions

Ship with wet ice; store at -20℃, avoid freeze -thaw cycles, valid for 12 months.

Product Contents

Component	G4009-1ML
Mycoplasma Prevention Reagent (1,000×)	1 mL
Manual	One copy

Assay Protocol / Procedures

Add Mycoplasma Prevention Reagent (1000×) to cell medium (containing serum, without double antibiotic) at a ratio of 1:1000, and mix well.

Note

1. The product can prevents mycoplasma contamination in cell cultures. If mycoplasma already exists in cells, it is recommended to use mycoplasma scavenging reagent (recommend G4006, G4007, G4008).
2. The product is stored at -20℃ to avoid freeze -thaw cycles,; If added to the cell culture medium, it can be stored in 2-8℃ for at least 1 month.
3. For your safty and health, please wear safety glasses, gloves, or protective clothing.

Attached Table: Features of Mycoplasma Removal Series

Product Name	Mycoplasma Elimination Reagent (100×)	Mycoplasma Elimination Reagent Plus (100×)	Mycoplasma Elimination Reagent (SweMyco-1+2) (100×)
Product Code	G4006	G4007	G4008
Composition	Quinolones、Tetracycline	Quinolones, Tetracyclines, Macrolides	Quinolones, Tetracyclines, Macrolides
Relative toxicity	Middle	High	Low
Clear speed	About 10 days	5-7 days	About 7 days
Ease of use	Easy	Easy	More complicated

Servicebio® Pure Water, Laboratory Use Only

Cat. # .: G4701-500ML

Product Information

Product Name	Cat. No.	Spec.
Pure Water, Laboratory Use Only	G4701-500ML	500 mL

Product Description/Introduction

This product is pure water prepared by EDI and distillation, sterilized by 0.1μm filter membrane. The electrical conductivity is less than 5.0 μs/cm, and the endotoxin is less than 0.25 EU/mL. It can be used for Cell experiments, molecular experiments, WB, IHC and other biological experiments.

Storage and Shipping Conditions

Ship and store at room temperature, valid for 36 months.

Note

1. The product is filtered and sterilized by 0.1μm filter membrane and can be used directly. Please pay attention to aseptic operation during use to avoid contamination.
2. For your safety and health, please wear safety glasses, gloves, or protective clothing.

SWE Matrigel (For Organoids, 3D Culture, Containing Phenol Red)

Cat.No. : G4133-10ML

Brand : Servicebio

Spec.: 10 mL （Containing Phenol Red）

Product Introduction

Product Information

Product Name	Cat No.	Spec.
SWE Matrigel（For Organoids, 3D Culture, Phenol Red-Free）	G4133-1ML	1 mL
	G4133-5ML	5 mL
	G4133-10ML	10 mL

Product Introduction

Swe Matrigel is a soluble basal matrix extracted from extracellular matrix protein-rich EHS)Engelbreth-Holm-Swarm) mouse tumors. The composition of matrigel includes laminin, collagen type IV, entactin, and heparan sulfate proteoglycans. Additionally, it contains epidermal growth factor)EGF), transforming growth factor)TGF-beta), insulin-like growth factor)IGF), fibroblast growth factor)FGF), tissue plasminogen activator, and other growth factors present in the EHS tumor itself. At room temperature, matrigel can be rapidly polymerized to form a biologically active three-dimensional matrix, which simulates the composition, structure, physical properties, and function of the basement membrane of cells in vivo. This can promote the proliferation and differentiation of cells in vitro, such as epithelial cells, vascular endothelial cells, melanoma cells, and stem cells, among others. It plays an important role in studying cell morphology, physiological function, invasion, and promotion of tumourigenicity of difficult-to-tumourigenic cells.

Swe Matrigel is a sterile product that does not contain relevant viruses affecting experimental animals. It has a protein concentration of 8-12 mg/mL, which can be applied to experimental angiogenesis studies, in vivo tumourigenesis, 3D organoid culture, and tumor cell invasion.

Storage and Shipping Conditions

The product is transported on dry ice, stored at -20 °C, and protected from light. It is valid for two years. Following initial thawing, the product should be stored in the refrigerator at -20 °C. It should not be stored in a frost-free refrigerator.

Product Component

Component Number	Component	G4133		
G4133	SWE Matrigel (for organoids, 3D culture, phenol red-Free)	1 mL	5 mL	10 mL
Product Manuals		1 copy		

Product Features

1. Swe Matrigel may undergo a color change during the freezing and thawing process. This is due to the reaction between the bicarbonate buffer and carbon dioxide and phenol red, which changes color from light yellow to dark red. However, this color change will disappear completely within five percent CO2, a normal phenomenon that will not affect the product's functionality. Phenol red-free models are white or light yellow, and this phenomenon does not occur.
2. It is recommended that Swe Matrigel be thawed in ice and placed in a refrigerator at 4°C overnight, as it tends to gel. Once the product has been thawed, it should be vortexed to ensure homogeneity. However, it should not be blown to avoid forming large air bubbles, which may affect the product's performance.
3. Swe Matrigel is a gelatinous liquid that will gradually gelatinize above 10 °C. It is therefore important to note that all items in direct contact with the product, such as pipette tips, Petri dishes, culture plates, and culture medium, should be pre-cooled or frozen in advance prior to use.
4. The specific batch variability of the protein concentration of this product is indicated in the product's Certificate of Analysis)COA). The dosage of this product must be determined according to the experimental needs and the specific protein concentration to ensure the experiment's accuracy. However,

diluting this product to a concentration of less than 3 mg/mL is not recommended.

Procedures

1. Swe matrigel should be thawed and dispensed while maintaining the product on ice.

The process of thawing is as follows: The product should be thawed in ice and subsequently placed in a refrigerator at a temperature of 4°C for approximately 12 hours. It is important to exercise caution to prevent the product from being placed on the refrigerator door by mistake or in a frequently opened refrigerator, as this may result in temperature fluctuations that could affect the product's performance. Following thawing, the vials should be vortexed to ensure homogeneity of the product.

The subsequent step is the dispensing of the product. Per the experimental requirements, pre-cooled pipette tips or pipettes are recommended for the aspiration and dispensing of the product into pre-cooled sterile centrifuge tubes. Following this, the dispensed product should be placed at a temperature of -20 ℃ or below in order to stabilize and protect it from light. Should the tip or pipette become obstructed during the dispensing process, it is recommended that a new pre-cooled tip or pipette be used at the earliest opportunity, with particular attention paid to aseptic operation.

2. Common encapsulation methods for Swe matrigel.

There are a number of encapsulation methods for matrigel, including the thin-layer gel method, the thick-layer gel method, and the thin-layer encapsulation method. These are suitable for different experiments, and the most appropriate method can be selected according to the specific experimental purpose.

a. Thin-layer gel method: the matrigel forms a gel with a thickness of approximately 0.5 mm, and the cells are spread on the thin-layer gel for culture. This method is primarily suited to cell attachment and proliferation, such as in blood vessel formation experiments.

b. Thaw the matrigel on ice one day in advance and place it in the refrigerator at 4 °C overnight. Following thawing, the vials can be vortexed, or a pre-cooled pipette/pipette tip can be used to mix the matrigel by slight blowing until it is homogeneous.

c. The plate should be placed on ice, and the matrigel added to the growth surface at a 50 μL/cm² concentration.

d. The plate should be incubated at 37 °C for 30 minutes to allow the matrigel to cure.

e.)Optional) It is recommended that unbound material be aspirated before gentle rinsing with serum-free medium, with particular attention paid to ensuring that the pipette tip does not scratch the coated surface.

f. Thick-layer gel method: the matrigel forms a gel with a thickness of approximately 1-2 mm, and the cells grow within the gel. This method is primarily suited to 3D organoid culture and other related experiments.

g. Place the matrigel on ice one day in advance and thaw it in the refrigerator at 4 °C overnight. Following thawing, the matrigel can be mixed by vortexing the vials or utilizing pre-cooled pipettes and pipette tips, which should be blown slightly to ensure a homogeneous mixture.

h. Transfer the culture plate to ice. The cells are then added to the matrigel and suspended using a pre-cooled pipette. The mixed matrigel should be added to the growth surface at 150-200 μL/cm² concentration.

i. The plate should be incubated at 37 °C for 30 minutes to allow the matrigel to cure.

j. The medium can be replenished according to the experimental requirements, while the method also allows for the culture of cells on top of the gel.

k. Thin-layer encapsulation method: A lower concentration of matrigel should be used to form a mixed protein encapsulation layer without forming a gel, and the cells should be spread on this thin layer for culture. This method is primarily suited to cell adhesion experiments, although it can also be employed in studies of tumor cell invasion in vitro.

l. The matrigel should be placed on ice one day in advance and thawed in the refrigerator at 4 °C overnight. Once thawed, the vial can be vortexed, or a pre-cooled pipette/pipette tip can be used to mix the matrigel until it is homogeneous by blowing it slightly.

m. The matrigel should be diluted to the desired concentration using a pre-cooled serum-free medium or PBS.

n. The diluted matrigel should then be added to the coated vessel, with the quantity added sufficient to cover the entire growth surface. The vessel should then be incubated at room temperature for 1-2 hours, depending on the time required for the matrix gel to solidify.

o. The unbound material should be aspirated, and the vessel rinsed gently with serum-free medium prior to use, ensuring that the pipette tip does not scratch the coated surface.

Note

1. This product is shipped in dry ice, which is a white or yellowish solid before thawing. If there is no dry ice in the foam box when it arrives and the product is in a gel state, it is advisable to contact us as soon as possible.
2. If the product is not in use, it is recommended to be stored at a temperature of -20 ℃ or below to prevent it from being exposed to light. It is also advisable that the product not be stored in a frost-free refrigerator.
3. It is not advisable to freeze or thaw this product repeatedly. In order to guarantee the efficacy of the product, it must be dispensed in accordance with the experimental specifications following the initial thawing.
4. It should be noted that this product is sterile and must be dispensed and used in a sterile environment.
5. The product is readily gelatinized; therefore, it is advisable to avoid direct contact with the bottle while taking the product to prevent the solidification of the product due to the body temperature. Furthermore, it is essential to ensure that the pipette tips, petri dishes, culture plates, and culture medium in direct contact with the product are pre-cooled or frozen in advance.
6. It is imperative that the product be kept on ice throughout the entirety of the experiment. Should the product solidify, it is no longer fit for purpose and cannot be used further.
7. It is recommended that the remaining matrigel not be retained for subsequent use after the experiment.

Servicebio® SWE Matrigel（For Organoids, 3D Culture, Phenol Red-Free）

Cat No.: G4133

Product Information

Product Name	Cat No.	Spec.
Swe Matrigel（For Organoids, 3D Culture, Phenol Red-Free）	G4133-1ML	1 mL
	G4133-5ML	5 mL
	G4133-10ML	10 mL

Product Introduction

Swe Matrigel is a soluble basal matrix extracted from extracellular matrix protein-rich EHS)Engelbreth-Holm-Swarm) mouse tumors. The composition of matrigel includes laminin, collagen type IV, entactin, and heparan sulfate proteoglycans. Additionally, it contains epidermal growth factor)EGF), transforming growth factor)TGF-beta), insulin-like growth factor)IGF), fibroblast growth factor)FGF), tissue plasminogen activator, and other growth factors present in the EHS tumor itself. At room temperature, matrigel can be rapidly polymerized to form a biologically active three-dimensional matrix, which simulates the composition, structure, physical properties, and function of the basement membrane of cells in vivo. This can promote the proliferation and differentiation of cells in vitro, such as epithelial cells, vascular endothelial cells, melanoma cells, and stem cells, among others. It plays an important role in studying cell morphology, physiological function, invasion, and promotion of tumourigenicity of difficult-to-tumourigenic cells.

Swe Matrigel is a sterile product that does not contain relevant viruses affecting experimental animals. It has a protein concentration of 8-12 mg/mL, which can be applied to experimental angiogenesis studies, in vivo tumourigenesis, 3D organoid culture, and tumor cell invasion.

Storage and Shipping Conditions

The product is transported on dry ice, stored at -20 °C, and protected from light. It is valid for two years. Following initial thawing, the product should be stored in the refrigerator at -20 °C. It should not be stored in a frost-free refrigerator.

Product Component

Component Number	Component	G4133		
G4133	Swe Matrigel (for organoids, 3D culture, phenol red-Free)	1 mL	5 mL	10 mL
Product Manuals		1 copy		

Product Features

1. Swe Matrigel may undergo a color change during the freezing and thawing process. This is due to the reaction between the bicarbonate buffer and carbon dioxide and phenol red, which changes color from light yellow to dark red. However, this color change will disappear completely within five percent CO2, a normal phenomenon that will not affect the product's functionality. Phenol red-free models are white or light yellow, and this phenomenon does not occur.
2. It is recommended that Swe Matrigel be thawed in ice and placed in a refrigerator at 4°C overnight, as it tends to gel. Once the product has been thawed, it should be vortexed to ensure homogeneity. However, it should not be blown to avoid forming large air bubbles, which may affect the product's performance.
3. Swe Matrigel is a gelatinous liquid that will gradually gelatinize above 10 °C. It is therefore important to note that all items in direct contact with the product, such as pipette tips, Petri dishes, culture plates, and

culture medium, should be pre-cooled or frozen in advance prior to use.

4. The specific batch variability of the protein concentration of this product is indicated in the product's Certificate of Analysis)COA). The dosage of this product must be determined according to the experimental needs and the specific protein concentration to ensure the experiment's accuracy. However, diluting this product to a concentration of less than 3 mg/mL is not recommended.

Procedures

1. Swe matrigel should be thawed and dispensed while maintaining the product on ice.

The process of thawing is as follows: The product should be thawed in ice and subsequently placed in a refrigerator at a temperature of 4°C for approximately 12 hours. It is important to exercise caution to prevent the product from being placed on the refrigerator door by mistake or in a frequently opened refrigerator, as this may result in temperature fluctuations that could affect the product's performance. Following thawing, the vials should be vortexed to ensure homogeneity of the product.

The subsequent step is the dispensing of the product. Per the experimental requirements, pre-cooled pipette tips or pipettes are recommended for the aspiration and dispensing of the product into pre-cooled sterile centrifuge tubes. Following this, the dispensed product should be placed at a temperature of -20 ℃ or below in order to stabilize and protect it from light. Should the tip or pipette become obstructed during the dispensing process, it is recommended that a new pre-cooled tip or pipette be used at the earliest opportunity, with particular attention paid to aseptic operation.

2. Common encapsulation methods for Swe matrigel.

There are a number of encapsulation methods for matrigel, including the thin-layer gel method, the thick-layer gel method, and the thin-layer encapsulation method. These are suitable for different experiments, and the most appropriate method can be selected according to the specific experimental purpose.

a. **Thin-layer gel method:** the matrigel forms a gel with a thickness of approximately 0.5 mm, and the cells are spread on the thin-layer gel for culture. This method is primarily suited to cell attachment and proliferation, such as in blood vessel formation experiments.

b. Thaw the matrigel on ice one day in advance and place it in the refrigerator at 4 °C overnight. Following thawing, the vials can be vortexed, or a pre-cooled pipette/pipette tip can be used to mix the matrigel by slight blowing until it is homogeneous.

c. The plate should be placed on ice, and the matrigel added to the growth surface at a 50 μL/cm² concentration.

d. The plate should be incubated at 37 °C for 30 minutes to allow the matrigel to cure.

e.)Optional) It is recommended that unbound material be aspirated before gentle rinsing with serum-free medium, with particular attention paid to ensuring that the pipette tip does not scratch the coated surface.

f. **Thick-layer gel method:** the matrigel forms a gel with a thickness of approximately 1-2 mm, and the cells grow within the gel. This method is primarily suited to 3D organoid culture and other related experiments.

g. Place the matrigel on ice one day in advance and thaw it in the refrigerator at 4 °C overnight. Following thawing, the matrigel can be mixed by vortexing the vials or utilizing pre-cooled pipettes and pipette tips, which should be blown slightly to ensure a homogeneous mixture.

h. Transfer the culture plate to ice. The cells are then added to the matrigel and suspended using a pre-cooled pipette. The mixed matrigel should be added to the growth surface at 150-200 μL/cm² concentration.

i. The plate should be incubated at 37 °C for 30 minutes to allow the matrigel to cure.

j. The medium can be replenished according to the experimental requirements, while the method also allows for the culture of cells on top of the gel.

k. **Thin-layer encapsulation method:** A lower concentration of matrigel should be used to form a mixed protein encapsulation layer without forming a gel, and the cells should be spread on this thin layer for culture. This method is primarily suited to cell adhesion experiments, although it can also be employed in studies of tumor cell invasion in vitro.

l. The matrigel should be placed on ice one day in advance and thawed in the refrigerator at 4 °C overnight. Once thawed, the vial can be vortexed, or a pre-cooled pipette/pipette tip can be used to mix the matrigel until it is homogeneous by blowing it slightly.

m. The matrigel should be diluted to the desired concentration using a pre-cooled serum-free medium or PBS.

n. The diluted matrigel should then be added to the coated vessel, with the quantity added sufficient to cover the entire growth surface. The vessel should then be incubated at room temperature for 1-2 hours, depending on the time required for the matrix gel to solidify.

o. The unbound material should be aspirated, and the vessel rinsed gently with serum-free medium prior to use, ensuring that the pipette tip does not scratch the coated surface.

Note

1. This product is shipped in dry ice, which is a white or yellowish solid before thawing. If there is no dry ice in the foam box when it arrives and the product is in a gel state, it is advisable to contact us as soon as possible.

2. If the product is not in use, it is recommended to be stored at a temperature of -20 ℃ or below to prevent it from being exposed to light. It is also advisable that the product not be stored in a frost-free refrigerator.

3. It is not advisable to freeze or thaw this product repeatedly. In order to guarantee the efficacy of the product, it must be dispensed in accordance with the experimental specifications following the initial thawing.

4. It should be noted that this product is sterile and must be dispensed and used in a sterile environment.

5. The product is readily gelatinized; therefore, it is advisable to avoid direct contact with the bottle while taking the product to prevent the solidification of the product due to the body temperature. Furthermore, it is essential to ensure that the pipette tips, petri dishes, culture plates, and culture medium in direct contact with the product are pre-cooled or frozen in advance.

6. It is imperative that the product be kept on ice throughout the entirety of the experiment. Should the product solidify, it is no longer fit for purpose and cannot be used further.

7. It is recommended that the remaining matrigel not be retained for subsequent use after the experiment.

Servicebio® SWE Matrigel (For Organoids, 3D Culture, Containing Phenol Red)
Cat No.: G4132

Product Information

Product Name	Cat No.	Spec.
SWE Matrigel (For Organoids, 3D Culture, Containing Phenol Red)	G4132-1ML	1 mL
	G4132-5ML	5 mL
	G4132-10ML	10 mL

Product Introduction

Swe Matrigel is a soluble basal matrix extracted from extracellular matrix protein-rich EHS (Engelbreth-Holm-Swarm) mouse tumors. The composition of matrigel includes laminin, collagen type IV, entactin, and heparan sulfate proteoglycans. Additionally, it contains epidermal growth factor (EGF), transforming growth factor (TGF-beta), insulin-like growth factor (IGF), fibroblast growth factor (FGF), tissue plasminogen activator, and other growth factors present in the EHS tumor itself. At room temperature, matrigel can be rapidly polymerized to form a biologically active three-dimensional matrix, which simulates the composition, structure, physical properties, and function of the basement membrane of cells in vivo. This can promote the proliferation and differentiation of cells in vitro, such as epithelial cells, vascular endothelial cells, melanoma cells, and stem cells, among others. It plays an important role in studying cell morphology, physiological function, invasion, and promotion of tumourigenicity of difficult-to-tumourigenic cells.

Swe Matrigel is a sterile product that does not contain relevant viruses affecting experimental animals. It has a protein concentration of 8-12 mg/mL, which can be applied to experimental angiogenesis studies, in vivo tumourigenesis, 3D organoid culture, and tumor cell invasion.

Storage and Shipping Conditions

The product is transported on dry ice, stored at -20 °C, and protected from light. It is valid for two years. Following initial thawing, the product should be stored in the refrigerator at -20 °C. It should not be stored in a frost-free refrigerator.

Product Component

Component Number	Component	G4132		
G4132	Swe Matrigel (for organoids, 3D culture, containing phenol red)	1 mL	5 mL	10 mL
Product Manuals		1 copy		

Product Features

1. Swe Matrigel may undergo a color change during the freezing and thawing process. This is due to the reaction between the bicarbonate buffer and carbon dioxide and phenol red, which changes color from light yellow to dark red. However, this color change will disappear completely within five percent CO2, a normal phenomenon that will not affect the product's functionality. Phenol red-free models are white or light yellow, and this phenomenon does not occur.
2. It is recommended that Swe Matrigel be thawed in ice and placed in a refrigerator at 4°C overnight, as it tends to gel. Once the product has been thawed, it should be vortexed to ensure homogeneity. However, it should not be blown to avoid forming large air bubbles, which may affect the product's performance.
3. Swe Matrigel is a gelatinous liquid that will gradually gelatinize above 10 °C. It is therefore important to note that all items in direct contact with the product, such as pipette tips, Petri dishes, culture plates, and culture medium, should be pre-cooled or frozen in advance prior to use.
4. The specific batch variability of the protein concentration of this product is indicated in the product's

Certificate of Analysis (COA). The dosage of this product must be determined according to the experimental needs and the specific protein concentration to ensure the experiment's accuracy. However, diluting this product to a concentration of less than 3 mg/mL is not recommended.

Procedures

1. Swe matrigel should be thawed and dispensed while maintaining the product on ice.

The process of thawing is as follows: The product should be thawed in ice and subsequently placed in a refrigerator at a temperature of 4°C for approximately 12 hours. It is important to exercise caution to prevent the product from being placed on the refrigerator door by mistake or in a frequently opened refrigerator, as this may result in temperature fluctuations that could affect the product's performance. Following thawing, the vials should be vortexed to ensure homogeneity of the product.

The subsequent step is the dispensing of the product. Per the experimental requirements, pre-cooled pipette tips or pipettes are recommended for the aspiration and dispensing of the product into pre-cooled sterile centrifuge tubes. Following this, the dispensed product should be placed at a temperature of -20 ℃ or below in order to stabilize and protect it from light. Should the tip or pipette become obstructed during the dispensing process, it is recommended that a new pre-cooled tip or pipette be used at the earliest opportunity, with particular attention paid to aseptic operation.

2. Common encapsulation methods for Swe matrigel.

There are a number of encapsulation methods for matrigel, including the thin-layer gel method, the thick-layer gel method, and the thin-layer encapsulation method. These are suitable for different experiments, and the most appropriate method can be selected according to the specific experimental purpose.

1) **Thin-layer gel method:** the matrigel forms a gel with a thickness of approximately 0.5 mm, and the cells are spread on the thin-layer gel for culture. This method is primarily suited to cell attachment and proliferation, such as in blood vessel formation experiments.

a. Thaw the matrigel on ice one day in advance and place it in the refrigerator at 4 °C overnight. Following thawing, the vials can be vortexed, or a pre-cooled pipette/pipette tip can be used to mix the matrigel by slight blowing until it is homogeneous.

b. The plate should be placed on ice, and the matrigel added to the growth surface at a 50 μL/cm² concentration.

c. The plate should be incubated at 37 °C for 30 minutes to allow the matrigel to cure.

d. (Optional) It is recommended that unbound material be aspirated before gentle rinsing with serum-free medium, with particular attention paid to ensuring that the pipette tip does not scratch the coated surface.

2) **Thick-layer gel method:** the matrigel forms a gel with a thickness of approximately 1-2 mm, and the cells grow within the gel. This method is primarily suited to 3D organoid culture and other related experiments.

a. Place the matrigel on ice one day in advance and thaw it in the refrigerator at 4 °C overnight. Following thawing, the matrigel can be mixed by vortexing the vials or utilizing pre-cooled pipettes and pipette tips, which should be blown slightly to ensure a homogeneous mixture.

b. Transfer the culture plate to ice. The cells are then added to the matrigel and suspended using a pre-cooled pipette. The mixed matrigel should be added to the growth surface at 150-200 μL/cm² concentration.

c. The plate should be incubated at 37 °C for 30 minutes to allow the matrigel to cure.

d. The medium can be replenished according to the experimental requirements, while the method

also allows for the culture of cells on top of the gel.

3) **Thin-layer encapsulation method:** A lower concentration of matrigel should be used to form a mixed protein encapsulation layer without forming a gel, and the cells should be spread on this thin layer for culture. This method is primarily suited to cell adhesion experiments, although it can also be employed in studies of tumor cell invasion in vitro.

a. The matrigel should be placed on ice one day in advance and thawed in the refrigerator at 4 °C overnight. Once thawed, the vial can be vortexed, or a pre-cooled pipette/pipette tip can be used to mix the matrigel until it is homogeneous by blowing it slightly.

b. The matrigel should be diluted to the desired concentration using a pre-cooled serum-free medium or PBS.

c. The diluted matrigel should then be added to the coated vessel, with the quantity added sufficient to cover the entire growth surface. The vessel should then be incubated at room temperature for 1-2 hours, depending on the time required for the matrix gel to solidify.

d. The unbound material should be aspirated, and the vessel rinsed gently with serum-free medium prior to use, ensuring that the pipette tip does not scratch the coated surface.

Note

1. This product is shipped in dry ice, which is a white or yellowish solid before thawing. If there is no dry ice in the foam box when it arrives and the product is in a gel state, it is advisable to contact us as soon as possible.
2. If the product is not in use, it is recommended to be stored at a temperature of -20 ℃ or below to prevent it from being exposed to light. It is also advisable that the product not be stored in a frost-free refrigerator.
3. It is not advisable to freeze or thaw this product repeatedly. In order to guarantee the efficacy of the product, it must be dispensed in accordance with the experimental specifications following the initial thawing.
4. It should be noted that this product is sterile and must be dispensed and used in a sterile environment.
5. The product is readily gelatinized; therefore, it is advisable to avoid direct contact with the bottle while taking the product to prevent the solidification of the product due to the body temperature. Furthermore, it is essential to ensure that the pipette tips, petri dishes, culture plates, and culture medium in direct contact with the product are pre-cooled or frozen in advance.
6. It is imperative that the product be kept on ice throughout the entirety of the experiment. Should the product solidify, it is no longer fit for purpose and cannot be used further.
7. It is recommended that the remaining matrigel not be retained for subsequent use after the experiment.

Servicebio® SWE Matrigel (For Organoids, 3D Culture, Containing Phenol Red)
Cat No.: G4132

Product Information

Product Name	Cat No.	Spec.
SWE Matrigel (For Organoids, 3D Culture, Containing Phenol Red)	G4132-1ML	1 mL
	G4132-5ML	5 mL
	G4132-10ML	10 mL

Product Introduction

Swe Matrigel is a soluble basal matrix extracted from extracellular matrix protein-rich EHS (Engelbreth-Holm-Swarm) mouse tumors. The composition of matrigel includes laminin, collagen type IV, entactin, and heparan sulfate proteoglycans. Additionally, it contains epidermal growth factor (EGF), transforming growth factor (TGF-beta), insulin-like growth factor (IGF), fibroblast growth factor (FGF), tissue plasminogen activator, and other growth factors present in the EHS tumor itself. At room temperature, matrigel can be rapidly polymerized to form a biologically active three-dimensional matrix, which simulates the composition, structure, physical properties, and function of the basement membrane of cells in vivo. This can promote the proliferation and differentiation of cells in vitro, such as epithelial cells, vascular endothelial cells, melanoma cells, and stem cells, among others. It plays an important role in studying cell morphology, physiological function, invasion, and promotion of tumourigenicity of difficult-to-tumourigenic cells.

Swe Matrigel is a sterile product that does not contain relevant viruses affecting experimental animals. It has a protein concentration of 8-12 mg/mL, which can be applied to experimental angiogenesis studies, in vivo tumourigenesis, 3D organoid culture, and tumor cell invasion.

Storage and Shipping Conditions

The product is transported on dry ice, stored at -20 °C, and protected from light. It is valid for two years. Following initial thawing, the product should be stored in the refrigerator at -20 °C. It should not be stored in a frost-free refrigerator.

Product Component

Component Number	Component	G4132		
G4132	Swe Matrigel (for organoids, 3D culture, containing phenol red)	1 mL	5 mL	10 mL
Product Manuals		1 copy		

Product Features

1. Swe Matrigel may undergo a color change during the freezing and thawing process. This is due to the reaction between the bicarbonate buffer and carbon dioxide and phenol red, which changes color from light yellow to dark red. However, this color change will disappear completely within five percent CO2, a normal phenomenon that will not affect the product's functionality. Phenol red-free models are white or light yellow, and this phenomenon does not occur.
2. It is recommended that Swe Matrigel be thawed in ice and placed in a refrigerator at 4°C overnight, as it tends to gel. Once the product has been thawed, it should be vortexed to ensure homogeneity. However, it should not be blown to avoid forming large air bubbles, which may affect the product's performance.
3. Swe Matrigel is a gelatinous liquid that will gradually gelatinize above 10 °C. It is therefore important to note that all items in direct contact with the product, such as pipette tips, Petri dishes, culture plates, and culture medium, should be pre-cooled or frozen in advance prior to use.
4. The specific batch variability of the protein concentration of this product is indicated in the product's

Certificate of Analysis (COA). The dosage of this product must be determined according to the experimental needs and the specific protein concentration to ensure the experiment's accuracy. However, diluting this product to a concentration of less than 3 mg/mL is not recommended.

Procedures

1. Swe matrigel should be thawed and dispensed while maintaining the product on ice.

The process of thawing is as follows: The product should be thawed in ice and subsequently placed in a refrigerator at a temperature of 4°C for approximately 12 hours. It is important to exercise caution to prevent the product from being placed on the refrigerator door by mistake or in a frequently opened refrigerator, as this may result in temperature fluctuations that could affect the product's performance. Following thawing, the vials should be vortexed to ensure homogeneity of the product.

The subsequent step is the dispensing of the product. Per the experimental requirements, pre-cooled pipette tips or pipettes are recommended for the aspiration and dispensing of the product into pre-cooled sterile centrifuge tubes. Following this, the dispensed product should be placed at a temperature of -20 ℃ or below in order to stabilize and protect it from light. Should the tip or pipette become obstructed during the dispensing process, it is recommended that a new pre-cooled tip or pipette be used at the earliest opportunity, with particular attention paid to aseptic operation.

2. Common encapsulation methods for Swe matrigel.

There are a number of encapsulation methods for matrigel, including the thin-layer gel method, the thick-layer gel method, and the thin-layer encapsulation method. These are suitable for different experiments, and the most appropriate method can be selected according to the specific experimental purpose.

1) **Thin-layer gel method:** the matrigel forms a gel with a thickness of approximately 0.5 mm, and the cells are spread on the thin-layer gel for culture. This method is primarily suited to cell attachment and proliferation, such as in blood vessel formation experiments.

a. Thaw the matrigel on ice one day in advance and place it in the refrigerator at 4 °C overnight. Following thawing, the vials can be vortexed, or a pre-cooled pipette/pipette tip can be used to mix the matrigel by slight blowing until it is homogeneous.

b. The plate should be placed on ice, and the matrigel added to the growth surface at a 50 μL/cm² concentration.

c. The plate should be incubated at 37 °C for 30 minutes to allow the matrigel to cure.

d. (Optional) It is recommended that unbound material be aspirated before gentle rinsing with serum-free medium, with particular attention paid to ensuring that the pipette tip does not scratch the coated surface.

2) **Thick-layer gel method:** the matrigel forms a gel with a thickness of approximately 1-2 mm, and the cells grow within the gel. This method is primarily suited to 3D organoid culture and other related experiments.

a. Place the matrigel on ice one day in advance and thaw it in the refrigerator at 4 °C overnight. Following thawing, the matrigel can be mixed by vortexing the vials or utilizing pre-cooled pipettes and pipette tips, which should be blown slightly to ensure a homogeneous mixture.

b. Transfer the culture plate to ice. The cells are then added to the matrigel and suspended using a pre-cooled pipette. The mixed matrigel should be added to the growth surface at 150-200 μL/cm² concentration.

c. The plate should be incubated at 37 °C for 30 minutes to allow the matrigel to cure.

d. The medium can be replenished according to the experimental requirements, while the method

also allows for the culture of cells on top of the gel.

3) **Thin-layer encapsulation method:** A lower concentration of matrigel should be used to form a mixed protein encapsulation layer without forming a gel, and the cells should be spread on this thin layer for culture. This method is primarily suited to cell adhesion experiments, although it can also be employed in studies of tumor cell invasion in vitro.

a. The matrigel should be placed on ice one day in advance and thawed in the refrigerator at 4 °C overnight. Once thawed, the vial can be vortexed, or a pre-cooled pipette/pipette tip can be used to mix the matrigel until it is homogeneous by blowing it slightly.

b. The matrigel should be diluted to the desired concentration using a pre-cooled serum-free medium or PBS.

c. The diluted matrigel should then be added to the coated vessel, with the quantity added sufficient to cover the entire growth surface. The vessel should then be incubated at room temperature for 1-2 hours, depending on the time required for the matrix gel to solidify.

d. The unbound material should be aspirated, and the vessel rinsed gently with serum-free medium prior to use, ensuring that the pipette tip does not scratch the coated surface.

Note

1. This product is shipped in dry ice, which is a white or yellowish solid before thawing. If there is no dry ice in the foam box when it arrives and the product is in a gel state, it is advisable to contact us as soon as possible.
2. If the product is not in use, it is recommended to be stored at a temperature of -20 ℃ or below to prevent it from being exposed to light. It is also advisable that the product not be stored in a frost-free refrigerator.
3. It is not advisable to freeze or thaw this product repeatedly. In order to guarantee the efficacy of the product, it must be dispensed in accordance with the experimental specifications following the initial thawing.
4. It should be noted that this product is sterile and must be dispensed and used in a sterile environment.
5. The product is readily gelatinized; therefore, it is advisable to avoid direct contact with the bottle while taking the product to prevent the solidification of the product due to the body temperature. Furthermore, it is essential to ensure that the pipette tips, petri dishes, culture plates, and culture medium in direct contact with the product are pre-cooled or frozen in advance.
6. It is imperative that the product be kept on ice throughout the entirety of the experiment. Should the product solidify, it is no longer fit for purpose and cannot be used further.
7. It is recommended that the remaining matrigel not be retained for subsequent use after the experiment.

Servicebio® Swe Matrigel (For Angiogenesis, Invasion, Tumorigenesis, Phenol Red-Free)
Cat No.: G4131

Product Information

Product Name	Cat No.	Spec.
Swe Matrigel (For Angiogenesis, Invasion, Tumorigenesis, Phenol Red-Free)	G4131-1ML	1 mL
	G4131-5ML	5 mL
	G4131-10ML	10 mL

Product Introduction

Swe Matrigel is a soluble basal matrix extracted from extracellular matrix protein-rich EHS (Engelbreth-Holm-Swarm) mouse tumors. The composition of matrigel includes laminin, collagen type IV, entactin, and heparan sulfate proteoglycans. Additionally, it contains epidermal growth factor (EGF), transforming growth factor (TGF-beta), insulin-like growth factor (IGF), fibroblast growth factor (FGF), tissue plasminogen activator, and other growth factors present in the EHS tumor itself. At room temperature, matrigel can be rapidly polymerized to form a biologically active three-dimensional matrix, which simulates the composition, structure, physical properties, and function of the basement membrane of cells in vivo. This can promote the proliferation and differentiation of cells in vitro, such as epithelial cells, vascular endothelial cells, melanoma cells, and stem cells, among others. It plays an important role in studying cell morphology, physiological function, invasion, and promotion of tumourigenicity of difficult-to-tumourigenic cells.

Swe Matrigel is a sterile product that does not contain relevant viruses affecting experimental animals. It has a protein concentration of 8-12 mg/mL, which can be applied to experimental angiogenesis studies, in vivo tumourigenesis, 3D organoid culture, and tumor cell invasion.

Storage and Shipping Conditions

The product is transported on dry ice, stored at -20 °C, and protected from light. It is valid for two years. Following initial thawing, the product should be stored in the refrigerator at -20 °C. It should not be stored in a frost-free refrigerator.

Product Component

Component Number	Component	G4131		
G4131	Swe Matrigel (for angiogenesis, invasion, tumorigenesis, phenol red-Free)	1 mL	5 mL	10 mL
Product Manuals		1 copy		

Product Features

1. Swe Matrigel may undergo a color change during the freezing and thawing process. This is due to the reaction between the bicarbonate buffer and carbon dioxide and phenol red, which changes color from light yellow to dark red. However, this color change will disappear completely within five percent CO2, a normal phenomenon that will not affect the product's functionality. Phenol red-free models are white or light yellow, and this phenomenon does not occur.
2. It is recommended that Swe Matrigel be thawed in ice and placed in a refrigerator at 4°C overnight, as it tends to gel. Once the product has been thawed, it should be vortexed to ensure homogeneity. However, it should not be blown to avoid forming large air bubbles, which may affect the product's performance.
3. Swe Matrigel is a gelatinous liquid that will gradually gelatinize above 10 °C. It is therefore important to note that all items in direct contact with the product, such as pipette tips, Petri dishes, culture plates, and culture medium, should be pre-cooled or frozen in advance prior to use.
4. The specific batch variability of the protein concentration of this product is indicated in the product's

Certificate of Analysis (COA). The dosage of this product must be determined according to the experimental needs and the specific protein concentration to ensure the experiment's accuracy. However, diluting this product to a concentration of less than 3 mg/mL is not recommended.

Procedures

1. Swe matrigel should be thawed and dispensed while maintaining the product on ice.

The process of thawing is as follows: The product should be thawed in ice and subsequently placed in a refrigerator at a temperature of 4°C for approximately 12 hours. It is important to exercise caution to prevent the product from being placed on the refrigerator door by mistake or in a frequently opened refrigerator, as this may result in temperature fluctuations that could affect the product's performance. Following thawing, the vials should be vortexed to ensure homogeneity of the product.

The subsequent step is the dispensing of the product. Per the experimental requirements, pre-cooled pipette tips or pipettes are recommended for the aspiration and dispensing of the product into pre-cooled sterile centrifuge tubes. Following this, the dispensed product should be placed at a temperature of -20 ℃ or below in order to stabilize and protect it from light. Should the tip or pipette become obstructed during the dispensing process, it is recommended that a new pre-cooled tip or pipette be used at the earliest opportunity, with particular attention paid to aseptic operation.

2. Common encapsulation methods for Swe matrigel.

There are a number of encapsulation methods for matrigel, including the thin-layer gel method, the thick-layer gel method, and the thin-layer encapsulation method. These are suitable for different experiments, and the most appropriate method can be selected according to the specific experimental purpose.

1) **Thin-layer gel method:** the matrigel forms a gel with a thickness of approximately 0.5 mm, and the cells are spread on the thin-layer gel for culture. This method is primarily suited to cell attachment and proliferation, such as in blood vessel formation experiments.

a. Thaw the matrigel on ice one day in advance and place it in the refrigerator at 4 °C overnight. Following thawing, the vials can be vortexed, or a pre-cooled pipette/pipette tip can be used to mix the matrigel by slight blowing until it is homogeneous.
b. The plate should be placed on ice, and the matrigel added to the growth surface at a 50 μL/cm² concentration.
c. The plate should be incubated at 37 °C for 30 minutes to allow the matrigel to cure.
d. (Optional) It is recommended that unbound material be aspirated before gentle rinsing with serum-free medium, with particular attention paid to ensuring that the pipette tip does not scratch the coated surface.

2) **Thick-layer gel method:** the matrigel forms a gel with a thickness of approximately 1-2 mm, and the cells grow within the gel. This method is primarily suited to 3D organoid culture and other related experiments.

a. Place the matrigel on ice one day in advance and thaw it in the refrigerator at 4 °C overnight. Following thawing, the matrigel can be mixed by vortexing the vials or utilizing pre-cooled pipettes and pipette tips, which should be blown slightly to ensure a homogeneous mixture.
b. Transfer the culture plate to ice. The cells are then added to the matrigel and suspended using a pre-cooled pipette. The mixed matrigel should be added to the growth surface at 150-200 μL/cm² concentration.
c. The plate should be incubated at 37 °C for 30 minutes to allow the matrigel to cure.
d. The medium can be replenished according to the experimental requirements, while the method also

allows for the culture of cells on top of the gel.

3) **Thin-layer encapsulation method:** A lower concentration of matrigel should be used to form a mixed protein encapsulation layer without forming a gel, and the cells should be spread on this thin layer for culture. This method is primarily suited to cell adhesion experiments, although it can also be employed in studies of tumor cell invasion in vitro.

a. The matrigel should be placed on ice one day in advance and thawed in the refrigerator at 4 °C overnight. Once thawed, the vial can be vortexed, or a pre-cooled pipette/pipette tip can be used to mix the matrigel until it is homogeneous by blowing it slightly.

b. The matrigel should be diluted to the desired concentration using a pre-cooled serum-free medium or PBS.

c. The diluted matrigel should then be added to the coated vessel, with the quantity added sufficient to cover the entire growth surface. The vessel should then be incubated at room temperature for 1-2 hours, depending on the time required for the matrix gel to solidify.

d. The unbound material should be aspirated, and the vessel rinsed gently with serum-free medium prior to use, ensuring that the pipette tip does not scratch the coated surface.

Note

1. This product is shipped in dry ice, which is a white or yellowish solid before thawing. If there is no dry ice in the foam box when it arrives and the product is in a gel state, it is advisable to contact us as soon as possible.

2. If the product is not in use, it is recommended to be stored at a temperature of -20 ℃ or below to prevent it from being exposed to light. It is also advisable that the product not be stored in a frost-free refrigerator.

3. It is not advisable to freeze or thaw this product repeatedly. In order to guarantee the efficacy of the product, it must be dispensed in accordance with the experimental specifications following the initial thawing.

4. It should be noted that this product is sterile and must be dispensed and used in a sterile environment.

5. The product is readily gelatinized; therefore, it is advisable to avoid direct contact with the bottle while taking the product to prevent the solidification of the product due to the body temperature. Furthermore, it is essential to ensure that the pipette tips, petri dishes, culture plates, and culture medium in direct contact with the product are pre-cooled or frozen in advance.

6. It is imperative that the product be kept on ice throughout the entirety of the experiment. Should the product solidify, it is no longer fit for purpose and cannot be used further.

7. It is recommended that the remaining matrigel not be retained for subsequent use after the experiment.

Servicebio® Swe Matrigel (for Angiogenesis,Invasion,Tumorigenesis,Containing Phenol Red)

Cat No.: G4130

Product Information

Product Name	Cat No.	Spec.
Swe Matrigel (for Angiogenesis,Invasion,Tumorigenesis,Containing Phenol Red)	G4130-1ML	1 mL
	G4130-5ML	5 mL
	G4130-10ML	10 mL

Product Introduction

Swe Matrigel is a soluble basal matrix extracted from extracellular matrix protein-rich EHS (Engelbreth-Holm-Swarm) mouse tumors. The composition of matrigel includes laminin, collagen type IV, entactin, and heparan sulfate proteoglycans. Additionally, it contains epidermal growth factor (EGF), transforming growth factor (TGF-beta), insulin-like growth factor (IGF), fibroblast growth factor (FGF), tissue plasminogen activator, and other growth factors present in the EHS tumor itself. At room temperature, matrigel can be rapidly polymerized to form a biologically active three-dimensional matrix, which simulates the composition, structure, physical properties, and function of the basement membrane of cells in vivo. This can promote the proliferation and differentiation of cells in vitro, such as epithelial cells, vascular endothelial cells, melanoma cells, and stem cells, among others. It plays an important role in studying cell morphology, physiological function, invasion, and promotion of tumourigenicity of difficult-to-tumourigenic cells.

Swe Matrigel is a sterile product that does not contain relevant viruses affecting experimental animals. It has a protein concentration of 8-12 mg/mL, which can be applied to experimental angiogenesis studies, in vivo tumourigenesis, 3D organoid culture, and tumor cell invasion.

Storage and Shipping Conditions

The product is transported on dry ice, stored at -20 °C, and protected from light. It is valid for two years. Following initial thawing, the product should be stored in the refrigerator at -20 °C. It should not be stored in a frost-free refrigerator.

Product Component

Component Number	Component	G4130		
G4130	Swe Matrigel (for angiogenesis, invasion, tumorigenesis, containing phenol red)	1 mL	5 mL	10 mL
Product Manuals		1 copy		

Product Features

1. Swe Matrigel may undergo a color change during the freezing and thawing process. This is due to the reaction between the bicarbonate buffer and carbon dioxide and phenol red, which changes color from light yellow to dark red. However, this color change will disappear completely within five percent CO2, a normal phenomenon that will not affect the product's functionality. Phenol red-free models are white or light yellow, and this phenomenon does not occur.
2. It is recommended that Swe Matrigel be thawed in ice and placed in a refrigerator at 4°C overnight, as it tends to gel. Once the product has been thawed, it should be vortexed to ensure homogeneity. However, it should not be blown to avoid forming large air bubbles, which may affect the product's performance.
3. Swe Matrigel is a gelatinous liquid that will gradually gelatinize above 10 °C. It is therefore important to

note that all items in direct contact with the product, such as pipette tips, Petri dishes, culture plates, and culture medium, should be pre-cooled or frozen in advance prior to use.

4. The specific batch variability of the protein concentration of this product is indicated in the product's Certificate of Analysis (COA). The dosage of this product must be determined according to the experimental needs and the specific protein concentration to ensure the experiment's accuracy. However, diluting this product to a concentration of less than 3 mg/mL is not recommended.

Procedures

1. Swe matrigel should be thawed and dispensed while maintaining the product on ice.

The process of thawing is as follows: The product should be thawed in ice and subsequently placed in a refrigerator at a temperature of 4°C for approximately 12 hours. It is important to exercise caution to prevent the product from being placed on the refrigerator door by mistake or in a frequently opened refrigerator, as this may result in temperature fluctuations that could affect the product's performance. Following thawing, the vials should be vortexed to ensure homogeneity of the product.

The subsequent step is the dispensing of the product. Per the experimental requirements, pre-cooled pipette tips or pipettes are recommended for the aspiration and dispensing of the product into pre-cooled sterile centrifuge tubes. Following this, the dispensed product should be placed at a temperature of -20 ℃ or below in order to stabilize and protect it from light. Should the tip or pipette become obstructed during the dispensing process, it is recommended that a new pre-cooled tip or pipette be used at the earliest opportunity, with particular attention paid to aseptic operation.

2. Common encapsulation methods for Swe matrigel.

There are a number of encapsulation methods for matrigel, including the thin-layer gel method, the thick-layer gel method, and the thin-layer encapsulation method. These are suitable for different experiments, and the most appropriate method can be selected according to the specific experimental purpose.

1) **Thin-layer gel method:** the matrigel forms a gel with a thickness of approximately 0.5 mm, and the cells are spread on the thin-layer gel for culture. This method is primarily suited to cell attachment and proliferation, such as in blood vessel formation experiments.
   a. Thaw the matrigel on ice one day in advance and place it in the refrigerator at 4 °C overnight. Following thawing, the vials can be vortexed, or a pre-cooled pipette/pipette tip can be used to mix the matrigel by slight blowing until it is homogeneous.
   b. The plate should be placed on ice, and the matrigel added to the growth surface at a 50 μL/cm² concentration.
   c. The plate should be incubated at 37 °C for 30 minutes to allow the matrigel to cure.
   d. (Optional) It is recommended that unbound material be aspirated before gentle rinsing with serum-free medium, with particular attention paid to ensuring that the pipette tip does not scratch the coated surface.
2) **Thick-layer gel method:** the matrigel forms a gel with a thickness of approximately 1-2 mm, and the cells grow within the gel. This method is primarily suited to 3D organoid culture and other related experiments.
   a. Place the matrigel on ice one day in advance and thaw it in the refrigerator at 4 °C overnight. Following thawing, the matrigel can be mixed by vortexing the vials or utilizing pre-cooled pipettes and pipette tips, which should be blown slightly to ensure a homogeneous mixture.
   b. Transfer the culture plate to ice. The cells are then added to the matrigel and suspended using a pre-cooled pipette. The mixed matrigel should be added to the growth surface at 150-200

μL/cm² concentration.

c. The plate should be incubated at 37 °C for 30 minutes to allow the matrigel to cure.

d. The medium can be replenished according to the experimental requirements, while the method also allows for the culture of cells on top of the gel.

3) **Thin-layer encapsulation method:** A lower concentration of matrigel should be used to form a mixed protein encapsulation layer without forming a gel, and the cells should be spread on this thin layer for culture. This method is primarily suited to cell adhesion experiments, although it can also be employed in studies of tumor cell invasion in vitro.

a. The matrigel should be placed on ice one day in advance and thawed in the refrigerator at 4 °C overnight. Once thawed, the vial can be vortexed, or a pre-cooled pipette/pipette tip can be used to mix the matrigel until it is homogeneous by blowing it slightly.

b. The matrigel should be diluted to the desired concentration using a pre-cooled serum-free medium or PBS.

c. The diluted matrigel should then be added to the coated vessel, with the quantity added sufficient to cover the entire growth surface. The vessel should then be incubated at room temperature for 1-2 hours, depending on the time required for the matrix gel to solidify.

d. The unbound material should be aspirated, and the vessel rinsed gently with serum-free medium prior to use, ensuring that the pipette tip does not scratch the coated surface.

Note

1. This product is shipped in dry ice, which is a white or yellowish solid before thawing. If there is no dry ice in the foam box when it arrives and the product is in a gel state, it is advisable to contact us as soon as possible.

2. If the product is not in use, it is recommended to be stored at a temperature of -20 ℃ or below to prevent it from being exposed to light. It is also advisable that the product not be stored in a frost-free refrigerator.

3. It is not advisable to freeze or thaw this product repeatedly. In order to guarantee the efficacy of the product, it must be dispensed in accordance with the experimental specifications following the initial thawing.

4. It should be noted that this product is sterile and must be dispensed and used in a sterile environment.

5. The product is readily gelatinized; therefore, it is advisable to avoid direct contact with the bottle while taking the product to prevent the solidification of the product due to the body temperature. Furthermore, it is essential to ensure that the pipette tips, petri dishes, culture plates, and culture medium in direct contact with the product are pre-cooled or frozen in advance.

6. It is imperative that the product be kept on ice throughout the entirety of the experiment. Should the product solidify, it is no longer fit for purpose and cannot be used further.

7. It is recommended that the remaining matrigel not be retained for subsequent use after the experiment.

Servicebio® Swe Matrigel (for Angiogenesis,Invasion,Tumorigenesis,Containing Phenol Red)

Cat No.: G4130

Product Information

Product Name	Cat No.	Spec.
Swe Matrigel (for Angiogenesis,Invasion,Tumorigenesis,Containing Phenol Red)	G4130-1ML	1 mL
	G4130-5ML	5 mL
	G4130-10ML	10 mL

Product Introduction

Swe Matrigel is a soluble basal matrix extracted from extracellular matrix protein-rich EHS (Engelbreth-Holm-Swarm) mouse tumors. The composition of matrigel includes laminin, collagen type IV, entactin, and heparan sulfate proteoglycans. Additionally, it contains epidermal growth factor (EGF), transforming growth factor (TGF-beta), insulin-like growth factor (IGF), fibroblast growth factor (FGF), tissue plasminogen activator, and other growth factors present in the EHS tumor itself. At room temperature, matrigel can be rapidly polymerized to form a biologically active three-dimensional matrix, which simulates the composition, structure, physical properties, and function of the basement membrane of cells in vivo. This can promote the proliferation and differentiation of cells in vitro, such as epithelial cells, vascular endothelial cells, melanoma cells, and stem cells, among others. It plays an important role in studying cell morphology, physiological function, invasion, and promotion of tumourigenicity of difficult-to-tumourigenic cells.

Swe Matrigel is a sterile product that does not contain relevant viruses affecting experimental animals. It has a protein concentration of 8-12 mg/mL, which can be applied to experimental angiogenesis studies, in vivo tumourigenesis, 3D organoid culture, and tumor cell invasion.

Storage and Shipping Conditions

The product is transported on dry ice, stored at -20 °C, and protected from light. It is valid for two years. Following initial thawing, the product should be stored in the refrigerator at -20 °C. It should not be stored in a frost-free refrigerator.

Product Component

Component Number	Component	G4130		
G4130	Swe Matrigel (for angiogenesis, invasion, tumorigenesis, containing phenol red)	1 mL	5 mL	10 mL
Product Manuals		1 copy		

Product Features

1. Swe Matrigel may undergo a color change during the freezing and thawing process. This is due to the reaction between the bicarbonate buffer and carbon dioxide and phenol red, which changes color from light yellow to dark red. However, this color change will disappear completely within five percent CO2, a normal phenomenon that will not affect the product's functionality. Phenol red-free models are white or light yellow, and this phenomenon does not occur.
2. It is recommended that Swe Matrigel be thawed in ice and placed in a refrigerator at 4°C overnight, as it tends to gel. Once the product has been thawed, it should be vortexed to ensure homogeneity. However, it should not be blown to avoid forming large air bubbles, which may affect the product's performance.
3. Swe Matrigel is a gelatinous liquid that will gradually gelatinize above 10 °C. It is therefore important to

note that all items in direct contact with the product, such as pipette tips, Petri dishes, culture plates, and culture medium, should be pre-cooled or frozen in advance prior to use.

4. The specific batch variability of the protein concentration of this product is indicated in the product's Certificate of Analysis (COA). The dosage of this product must be determined according to the experimental needs and the specific protein concentration to ensure the experiment's accuracy. However, diluting this product to a concentration of less than 3 mg/mL is not recommended.

Procedures

1. Swe matrigel should be thawed and dispensed while maintaining the product on ice.

The process of thawing is as follows: The product should be thawed in ice and subsequently placed in a refrigerator at a temperature of 4°C for approximately 12 hours. It is important to exercise caution to prevent the product from being placed on the refrigerator door by mistake or in a frequently opened refrigerator, as this may result in temperature fluctuations that could affect the product's performance. Following thawing, the vials should be vortexed to ensure homogeneity of the product.

The subsequent step is the dispensing of the product. Per the experimental requirements, pre-cooled pipette tips or pipettes are recommended for the aspiration and dispensing of the product into pre-cooled sterile centrifuge tubes. Following this, the dispensed product should be placed at a temperature of -20 ℃ or below in order to stabilize and protect it from light. Should the tip or pipette become obstructed during the dispensing process, it is recommended that a new pre-cooled tip or pipette be used at the earliest opportunity, with particular attention paid to aseptic operation.

2. Common encapsulation methods for Swe matrigel.

There are a number of encapsulation methods for matrigel, including the thin-layer gel method, the thick-layer gel method, and the thin-layer encapsulation method. These are suitable for different experiments, and the most appropriate method can be selected according to the specific experimental purpose.

1) **Thin-layer gel method:** the matrigel forms a gel with a thickness of approximately 0.5 mm, and the cells are spread on the thin-layer gel for culture. This method is primarily suited to cell attachment and proliferation, such as in blood vessel formation experiments.
   a. Thaw the matrigel on ice one day in advance and place it in the refrigerator at 4 °C overnight. Following thawing, the vials can be vortexed, or a pre-cooled pipette/pipette tip can be used to mix the matrigel by slight blowing until it is homogeneous.
   b. The plate should be placed on ice, and the matrigel added to the growth surface at a 50 μL/cm² concentration.
   c. The plate should be incubated at 37 °C for 30 minutes to allow the matrigel to cure.
   d. (Optional) It is recommended that unbound material be aspirated before gentle rinsing with serum-free medium, with particular attention paid to ensuring that the pipette tip does not scratch the coated surface.
2) **Thick-layer gel method:** the matrigel forms a gel with a thickness of approximately 1-2 mm, and the cells grow within the gel. This method is primarily suited to 3D organoid culture and other related experiments.
   a. Place the matrigel on ice one day in advance and thaw it in the refrigerator at 4 °C overnight. Following thawing, the matrigel can be mixed by vortexing the vials or utilizing pre-cooled pipettes and pipette tips, which should be blown slightly to ensure a homogeneous mixture.
   b. Transfer the culture plate to ice. The cells are then added to the matrigel and suspended using a pre-cooled pipette. The mixed matrigel should be added to the growth surface at 150-200

μL/cm² concentration.

c. The plate should be incubated at 37 °C for 30 minutes to allow the matrigel to cure.

d. The medium can be replenished according to the experimental requirements, while the method also allows for the culture of cells on top of the gel.

3) **Thin-layer encapsulation method:** A lower concentration of matrigel should be used to form a mixed protein encapsulation layer without forming a gel, and the cells should be spread on this thin layer for culture. This method is primarily suited to cell adhesion experiments, although it can also be employed in studies of tumor cell invasion in vitro.

a. The matrigel should be placed on ice one day in advance and thawed in the refrigerator at 4 °C overnight. Once thawed, the vial can be vortexed, or a pre-cooled pipette/pipette tip can be used to mix the matrigel until it is homogeneous by blowing it slightly.

b. The matrigel should be diluted to the desired concentration using a pre-cooled serum-free medium or PBS.

c. The diluted matrigel should then be added to the coated vessel, with the quantity added sufficient to cover the entire growth surface. The vessel should then be incubated at room temperature for 1-2 hours, depending on the time required for the matrix gel to solidify.

d. The unbound material should be aspirated, and the vessel rinsed gently with serum-free medium prior to use, ensuring that the pipette tip does not scratch the coated surface.

Note

1. This product is shipped in dry ice, which is a white or yellowish solid before thawing. If there is no dry ice in the foam box when it arrives and the product is in a gel state, it is advisable to contact us as soon as possible.

2. If the product is not in use, it is recommended to be stored at a temperature of -20 ℃ or below to prevent it from being exposed to light. It is also advisable that the product not be stored in a frost-free refrigerator.

3. It is not advisable to freeze or thaw this product repeatedly. In order to guarantee the efficacy of the product, it must be dispensed in accordance with the experimental specifications following the initial thawing.

4. It should be noted that this product is sterile and must be dispensed and used in a sterile environment.

5. The product is readily gelatinized; therefore, it is advisable to avoid direct contact with the bottle while taking the product to prevent the solidification of the product due to the body temperature. Furthermore, it is essential to ensure that the pipette tips, petri dishes, culture plates, and culture medium in direct contact with the product are pre-cooled or frozen in advance.

6. It is imperative that the product be kept on ice throughout the entirety of the experiment. Should the product solidify, it is no longer fit for purpose and cannot be used further.

7. It is recommended that the remaining matrigel not be retained for subsequent use after the experiment.

Swe Matrigel (For Angiogenesis,Invasion,Tumorigenesis,Phenol Red-Free)

Cat.No.： G4131-5ML

Brand： Servicebio

Spec.: 5 mL （ Phenol Red-Free ）

Product Introduction

Product Information

Product Name	Cat No.	Spec.
Swe Matrigel (For Angiogenesis, Invasion, Tumorigenesis, Phenol Red-Free)	G4131-1ML	1 mL
	G4131-5ML	5 mL
	G4131-10ML	10 mL

Product Introduction

Swe Matrigel is a soluble basal matrix extracted from extracellular matrix protein-rich EHS (Engelbreth-Holm-Swarm) mouse tumors. The composition of matrigel includes laminin, collagen type IV, entactin, and heparan sulfate proteoglycans. Additionally, it contains epidermal growth factor (EGF), transforming growth factor (TGF-beta), insulin-like growth factor (IGF), fibroblast growth factor (FGF), tissue plasminogen activator, and other growth factors present in the EHS tumor itself. At room temperature, matrigel can be rapidly polymerized to form a biologically active three-dimensional matrix, which simulates the composition, structure, physical properties, and function of the basement membrane of cells in vivo. This can promote the proliferation and differentiation of cells in vitro, such as epithelial cells, vascular endothelial cells, melanoma cells, and stem cells, among others. It plays an important role in studying cell morphology, physiological function, invasion, and promotion of tumourigenicity of difficult-to-tumourigenic cells.

Swe Matrigel is a sterile product that does not contain relevant viruses affecting experimental animals. It has a protein concentration of 8-12 mg/mL, which can be applied to experimental angiogenesis studies, in vivo tumourigenesis, 3D organoid culture, and tumor cell invasion.

Storage and Shipping Conditions

The product is transported on dry ice, stored at -20 °C, and protected from light. It is valid for two years. Following initial thawing, the product should be stored in the refrigerator at -20 °C. It should not be stored in a frost-free refrigerator.

Product Component

Component Number	Component	G4131		
G4131	Swe Matrigel (for angiogenesis, invasion, tumorigenesis, phenol red-Free)	1 mL	5 mL	10 mL
Product Manuals		1 copy		

Product Features

1. Swe Matrigel may undergo a color change during the freezing and thawing process. This is due to the reaction between the bicarbonate buffer and carbon dioxide and phenol red, which changes color from light yellow to dark red. However, this color change will disappear completely within five percent CO2, a normal phenomenon that will not affect the product's functionality. Phenol red-free models are white or light yellow, and this phenomenon does not occur.
2. It is recommended that Swe Matrigel be thawed in ice and placed in a refrigerator at 4°C overnight, as it tends to gel. Once the product has been thawed, it should be vortexed to ensure homogeneity. However, it should not be blown to avoid forming large air bubbles, which may affect the product's performance.
3. Swe Matrigel is a gelatinous liquid that will gradually gelatinize above 10 °C. It is therefore important to note that all items in direct contact with the product, such as pipette tips, Petri dishes, culture plates, and culture medium, should be pre-cooled or frozen in advance prior to use.
4. The specific batch variability of the protein concentration of this product is indicated in the product's Certificate of Analysis (COA). The dosage of this product must be determined according to the experimental needs and the specific protein concentration to ensure the experiment's accuracy. However, diluting this product to a concentration of less than 3 mg/mL is not recommended.

Procedures

1. Swe matrigel should be thawed and dispensed while maintaining the product on ice.

The process of thawing is as follows: The product should be thawed in ice and subsequently placed in a refrigerator at a temperature of 4°C for approximately 12 hours. It is important to exercise caution to prevent the product from being placed on the refrigerator door by mistake or in a frequently opened refrigerator, as this may result in temperature fluctuations that could affect the product's performance. Following thawing, the vials should be vortexed to ensure homogeneity of the product.

The subsequent step is the dispensing of the product. Per the experimental requirements, pre-cooled pipette tips or pipettes are recommended for the aspiration and dispensing of the product into pre-cooled sterile centrifuge tubes. Following this, the dispensed product should be placed at a temperature of -20 ℃ or below in order to stabilize and protect it from light. Should the tip or pipette become obstructed during the dispensing process, it is recommended that a new pre-cooled tip or pipette be used at the earliest opportunity, with particular attention paid to aseptic operation.

2. Common encapsulation methods for Swe matrigel.

There are a number of encapsulation methods for matrigel, including the thin-layer gel method, the thick-layer gel method, and the thin-layer encapsulation method. These are suitable for different experiments, and the most appropriate method can be selected according to the specific experimental purpose.

1) Thin-layer gel method: the matrigel forms a gel with a thickness of approximately 0.5 mm, and the cells are spread on the thin-layer gel for culture. This method is primarily suited to cell attachment and proliferation, such as in blood vessel formation experiments.

a. Thaw the matrigel on ice one day in advance and place it in the refrigerator at 4 °C overnight. Following thawing, the vials can be vortexed, or a pre-cooled pipette/pipette tip can be used to mix the matrigel by slight blowing until it is homogeneous.

b. The plate should be placed on ice, and the matrigel added to the growth surface at a 50 μL/cm² concentration.

c. The plate should be incubated at 37 °C for 30 minutes to allow the matrigel to cure.

d. (Optional) It is recommended that unbound material be aspirated before gentle rinsing with serum-free medium, with particular attention paid to ensuring that the pipette tip does not scratch the coated surface.

2) Thick-layer gel method: the matrigel forms a gel with a thickness of approximately 1-2 mm, and the cells grow within the gel. This method is primarily suited to 3D organoid culture and other related experiments.

a. Place the matrigel on ice one day in advance and thaw it in the refrigerator at 4 °C overnight. Following thawing, the matrigel can be mixed by vortexing the vials or utilizing pre-cooled pipettes and pipette tips, which should be blown slightly to ensure a homogeneous mixture.

b. Transfer the culture plate to ice. The cells are then added to the matrigel and suspended using a pre-cooled pipette. The mixed matrigel should be added to the growth surface at 150-200 μL/cm² concentration.

c. The plate should be incubated at 37 °C for 30 minutes to allow the matrigel to cure.

d. The medium can be replenished according to the experimental requirements, while the method also allows for the culture of cells on top of the gel.

3) Thin-layer encapsulation method: A lower concentration of matrigel should be used to form a mixed protein encapsulation layer without forming a gel, and the cells should be spread on this thin layer for culture. This method is primarily suited to cell adhesion experiments, although it can also be employed in studies of tumor cell invasion in vitro.

a. The matrigel should be placed on ice one day in advance and thawed in the refrigerator at 4 °C overnight. Once thawed, the vial can be vortexed, or a pre-cooled pipette/pipette tip can be used to mix the matrigel until it is homogeneous by blowing it slightly.

b. The matrigel should be diluted to the desired concentration using a pre-cooled serum-free medium or PBS.

c. The diluted matrigel should then be added to the coated vessel, with the quantity added sufficient to cover the entire growth surface. The vessel should then be incubated at room temperature for 1-2 hours, depending on the time required for the matrix gel to solidify.

d. The unbound material should be aspirated, and the vessel rinsed gently with serum-free medium prior to use, ensuring that the pipette tip does not scratch the coated surface.

Note

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3. It is not advisable to freeze or thaw this product repeatedly. In order to guarantee the efficacy of the product, it must be dispensed in accordance with the experimental specifications following the initial thawing.
4. It should be noted that this product is sterile and must be dispensed and used in a sterile environment.
5. The product is readily gelatinized; therefore, it is advisable to avoid direct contact with the bottle while taking the product to prevent the solidification of the product due to the body temperature. Furthermore, it is essential to ensure that the pipette tips, petri dishes, culture plates, and culture medium in direct contact with the product are pre-cooled or frozen in advance.
6. It is imperative that the product be kept on ice throughout the entirety of the experiment. Should the product solidify, it is no longer fit for purpose and cannot be used further.
7. It is recommended that the remaining matrigel not be retained for subsequent use after the experiment.

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