

## mscGO™ XF



Cat. No.: CC008-0500

Size: 500 ml

Cat. No.: CC008-0060

Size: 60 ml

### Storage:

mscGO™ XF Medium store at 2-8°C protecting from light.

mscGO™ XF Supplement store at -20°C protecting from light.

Complete medium store at 2-8°C protecting from light.

### Description

mscGO™ XF is a serum-free and xeno-free complete medium for supporting the growth and expansion of human mesenchymal stem cells. A unique product designed for general academic research units or clinical and industrial production. It can be used in bone marrow mesenchymal stem cells (BM-MS), adipose-derived mesenchymal stem cells (ADSC), umbilical cord mesenchymal stem cells (UC-MS), and amniotic fluid mesenchymal stem cells (AF-MS). The ingredients of mscGO™ XF are steady and all use GMP-compliant raw materials, so the product quality is quite stable and reliable. In addition to the general conventional attachment of cultured mesenchymal stem cells, this product can also be used in suspension culture systems, which is of great for future planning into industrial grade production.

### Features

- No need to add any additional supplements
- Suitable for the primary culture of MSC from adipose tissue and umbilical cord (UC).
- Enables competitive performance in human MSC growth compared to serum-supplemented (DMEM/F12 + 20% FBS) as well as other commercial serum-free media.
- Using mscGO™ XF, human MSCs can be expanded beyond 5 passages while still maintaining their tri-lineage mesoderm differentiation potential (i.e., ability to differentiate into osteogenic, chondrogenic and adipogenic lineages)
- Compared with serum-containing products or serum-free media, mscGO™ XF has a great growth rate of about three times.

### Application

- Cell culture.

### Kit Contents

| Contents             | CC008-0500 | CC008-0060                  |
|----------------------|------------|-----------------------------|
| mscGO™ XF Medium     | 500 ml     | 60 ml (Supplement included) |
| mscGO™ XF Supplement | 6.2 ml     | --                          |

### Quality Control

The quality of the mscGO™ XF is tested on a lot-to-lot basis to ensure consistent product quality.

### Required Materials

- Gelatin for cell attachment
- 6-well cell culture plates
- Incubator
- Centrifuge

### Protocol

#### Medium Preparation

1. Thaw mscGO™ XF Supplement at 2°C to 8°C, use immediately once thawed.  
Note: Avoid repeated freeze/thaw cycles of mscGO™ XF Supplement.
2. Add mscGO™ XF Supplement in mscGO™ XF Medium prior to use.
3. Once supplemented, the complete mscGO™ XF is stable for up to two weeks when stored at 2°C to 8°C protected from light. We do not recommend using beyond two weeks.
4. Use the complement medium in a 25°C water bath for 30 minutes to return to temperature.

#### Preparation before Operation

mscGO™ XF needs to be paired with gelatin coating to allow mesenchymal stem cells to be attached. The gelatin solution is provided below for application in the coating mode for reference.

1. Preparation of 0.5% gelatin solution.
  - I. Weight 2.5 g of gelatin powder and 500 ml of purified water into a glass serum bottle.
  - II. The above prepared solution was placed in an autoclave and sterilized at 121°C for 20 minutes. After cooling, it was stored at 4 ° C for storage.
2. Coating gelatin (take 6-well cell culture plate as an example; please carry out under the biosafety operation cabinet, follow the cell culture aseptic operation specification.)
  - I. Add 0.5% gelatin solution of ice, 1 ml/well, to a single well of a 6-well plate. Gently shake the plate several times to allow the gelatin to fill the well. Place it in a 37 ° C incubator for 60 minutes;
  - II. At the end of the action period, aspirate the solution in the 6-well plate and add 2 ml of mscGO™ XF and place in a 37 ° C incubator (new subcultured or thawed cells to be planted).
3. Please follow the biosafety operating cabinet and follow the cell culture thawing protocol.

#### Cell Thawing

1. Quickly thaw the cell cryotubes in a water bath pre-warm at 37 °C
2. When the cell fluid is dissolved back to the remaining small piece of ice floe, the frozen tube is moved to the aseptic processing station, and the cell liquid is transferred from the freezing tube to the 15 ml centrifuge tube.
3. Take 1ml of mscGO™ XF to rinse the frozen tube, and slowly drip the culture medium into the centrifuge tube (3 to 5 drops per 10 seconds). During the process, gently shake the tube to speed up the solution mixing.
4. Centrifuge the mixture for 3 minutes at 200 x g.
5. Remove the supernatant and suspend the cells by gently aspirating several times with 1 ml of mscGO™ XF.
6. Counting. The number of cells planted at 6x10<sup>3</sup>/cm<sup>2</sup> was counted in a culture plate in which gelatin coating was completed.
7. The plate was gently shaken, and the cells were uniformly dispersed in a disk under a microscope. The plate was placed in a 37°C incubator containing 5% CO<sub>2</sub> for cultivation.
8. It is recommended to change the medium every two days.

## Troubleshooting

Refer to the table below to troubleshooting problems that you may encounter when did culture cells with the kit.

| Problem     | Cause                   | Solution              |
|-------------|-------------------------|-----------------------|
| Poor growth | Incorrect concentration | Optimum concentration |

## Related Ordering Information

| Cat. No.   | Description                   | Size    |
|------------|-------------------------------|---------|
| CC131-1000 | DMEM/F-12                     | 1 Liter |
| CC501-0100 | Antibiotic-Antimycotic, 100X  | 100 mL  |
| CC502-0100 | Penicillin-Streptomycin, 100X | 100 mL  |
| CC507-0100 | 0.5% Trypsin-EDTA, 10X        | 100 mL  |

## Caution

1. During operation, always wear a lab coat, disposable gloves, and protective equipment.
2. All products are for research use only.