Optimization
Makes Differences

# OPM-VERO SFM6C3

Serum-free Cell Culture Medium

—— For Vaccine Production

**OPM-VERO SFM6C3** is a serum-free cell culture medium designed for adherent culture of Vero cells and contains L-Glutamine. This medium supports the production of human vaccines such as COVID-19 vaccine, polio vaccine, smallpox vaccine, rabies vaccine, Japanese B encephalitis vaccine, rotavirus vaccine, enterovirus Type 71 vaccine and oncolytic virus, and the production of veterinary vaccines such as porcine diarrhea virus vaccine and small ruminant vaccine, etc.

## Application

OPM-VERO SFM6C3 is intended for large scale manufacturing of therapeutic biomolecules, as well as for research purposes, but not for human or any therapeutic use.

## Storage & Transportation

Store at 2~8℃, dark and dry
Ship at Room temperature (Liquid), Blue ice (Dry powder)

## Shelf Life

OPM-VERO SFM6C3 Medium Liquid: 12 months
OPM-VERO SFM6C3 Dry Powder: 24 months

## Reconstitution Method for Dry Powder

1. Measure out 90% of final required volume of purified water intended for cell culture use, e.g. WFI. Recommended water temperature is 25~35℃ (minimum final volume ≧ 1L) .

2. Slowly add dry powder medium at 19.86 g/L while stirring.

3. Adjust pH to 7.2 with 1N NaOH or 1N HCl.

4. Add cell culture grade purified water to 100% final volume.

5. Continue to stir for 10 minutes. Sterile filter using a membrane filter with a pore size of 0.22 micron.

## Quality Specifications

| Specifications | OPM-VERO SFM6C3 Medium | OPM-VERO SFM6C3 DPM |
|---|---|---|
| Appearance | Red clear liquid | Off-white or light yellow, homogenous dry powder |
| pH | 7.2~7.7 | 7.2~7.7 |
| Osmolality (mOsm/kg) | 285~315 | 285~315 |
| Solubility | —— | Good by following the reconstitution instructions |
| Endotoxin (EU/mL) | ＜1.0 | ＜1.0 |
| Sterility test | Negative | —— |

## Cell Culture Conditions

36℃~38℃, 5~8%$CO_2$

## Cell Recovery

1. Rapidly thaw (<2 min) a vial of frozen cells in a 37 °C water bath.

2. Transfer the entire contents aseptically into a shake flask containing 15 mL mL prewarmed OPM-VERO SFM6C3 cell culture medium without antibiotics.

3. Incubate at 37 °C in a humidified atmosphere of 5%~8% $CO_2$ in air.

4. Passage cells when the confluency reaches 80–100%.

## Cell Culture Passaging

1. Aspirate medium from cell monolayer and rinse the flask three times with prewarmed DPBS without $Ca^{2+}$ or $Mg^{2+}$.

2. Add 5 mL 0.25% Trypsin-EDTA to the flask and incubate until cells have detached (~2–5 minutes at room temperature).

3. Add prewarmed 9 mL OPM-VERO SFM6C3 medium to stop the dissociation reaction.

Note: If using 0.25% Trypsin-EDTA, addition of 500 µg/mL Soybean Trypsin Inhibitor is required.

4. Centrifuge cell suspension at 100 ×g for 5 minutes and discard the supernatant.

5. Resuspend the cell pellet in 10mL OPM-VERO SFM6C3 medium.

6. Seed flasks at 1~5 × $10^4$ viable cells/$cm^2$.

7. Incubate cells in a humidified 37 °C incubator with 5~8% $CO_2$ until the confluency reaches 80–100%.

## Cryopreservation

1. Harvest the desired quantity of cells in log phase of growth with viability over 90%. Save the conditioned medium to prepare freezing medium.

2. Determine VCD to ensure that the final cell density is 1~5×$10^6$ cells/ mL.

3. Harvest cells when the confluency reaches 80%.

4. Prepare the freezing medium consisting of 92.5% OPM-VERO SFM6C3 (50:50 ratio of fresh to conditioned media) +7.5% DMSO, and let the freezing medium cool down to 4℃.

5. Harvest cells and centrifuge at 100 × g for 5–10 minutes. Resuspend the cell pellet in the pre-determined volume of 4°C freezing medium.

6. Dispense aliquots of this suspension into cryo-vials ((1.5~2 mL per vial).

7. Place the vials in a cryo-box or a controlled rate freezing apparatus following standard procedures (1°C decrease per minute).

8. For long-term storage, transfer the vials to liquid nitrogen.

# Order Information

## Cell Culture Media

| Name | Cat No. | Type | Volume |
|---|---|---|---|
| OPM-VERO SFM6C3 Medium | C216306 | Liquid | 500ml /1000 ml |
| OPM-VERO SFM6C3 DPM | C210863 | Dry powder | 10L/50L/100L |

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