CellCor™ EXO CD User Guide

Serum-free chemically defined media for expansion and isolation of hMSC-derived exosome

Product Description

CellCor™ EXO CD is a serum-free, chemically defined medium for both human-derived mesenchymal stem cell (hMSC) growth and isolation of hMSC-derived exosomes. It does not contain any animal/human-derived components, which have been controversial for traditional exosome collection. Quality control tests such as sterility, endotoxin, mycoplasma, etc. have been conducted after manufacture.

Product No.	Product	Volume	Storage	Shelf life
YSP017	CellCor™ EXO CD	500 mL	2-8℃	6 months

Key Requirements

Item	Recommendations
Antibiotics	Gentamicin or Penicillin streptomycin
Detach solution	TrypLE™ Express (Gibco) *
Culture ware	Tissue Culture Flask, Plate, Cell Factory (Corning, Nunc or Falcon)
Seeding cell counts	4,000-5,000 cells/cm^2
Media volume	T25 flask (5 mL), T75 flask (15 mL), T175 flask (30-40 mL), Cell Factory (100mL-1L)
Cell harvest confluency	75-85% (Figure.1)
Exosome isolation confluency	85-90% (Figure.1)

※ *Note: Why Use TrypLE™ Express and Not Trypsin-EDTA? CellCor™ EXO CD does not contain any serum components that could stop the activity of trypsin. Therefore, we strongly recommend the use of TrypLE™ Express, which does not require serum neutralization.*

Process (at a glance)

Enabling Flexible Research Design

■ **Media Change Process**

Thaw cells with CellCor™ MSC CD AOF (or commonly used culture media) → Expand cells → (Rinsing) → Change media with CellCor™ EXO CD → Exosome enrichment → Collect conditioned media → Isolate exosomes

■ **Seeding with CellCor™ EXO CD Process**

Thaw cells with CellCor™ MSC CD AOF (or commonly used culture media) → Cell expansion → Cell seeding with CellCor™ EXO CD → Exosome enrichment → Conditioned media Collection → Isolate exosomes

■ **Thawing with CellCor™ EXO CD Process**

Thaw cells with CellCor™ EXO CD → Cell expansion → Exosome enrichment → Conditioned media Collection → Isolate exosomes

How to use CellCor™ EXO CD

■ **Media Change Process**

1. Aliquot CellCor™ MSC CD AOF (or conventional cell culture medium) inside a biosafety cabinet (BSC).
2. Thaw cryovial in a 37˚C water bath for 1-2 minutes.
3. Suspend the cells in CellCor™ MSC CD AOF (or conventional cell culture medium) at a 1:9 ratio to the thawed cell pellet.

4. Centrifuge the tube at 200–300 xg, RT for 3 minutes. Resuspend the cells with CellCor™ MSC CD AOF (or conventional cell culture medium) and perform cell count.
5. Seed cells at a density of 4,000–5,000 cells/cm^2 with CellCor™ MSC CD AOF (or traditional cell culture medium) in a cultureware.
6. Incubate in a CO_2 incubator at 37˚C in a humidified atmosphere with 5% CO_2.
7. Proceed sub-culture when cells reach 75–85% confluency.
8. Seed the expanded cells at a density of 4,000–5,000 cells/cm^2, according to the purpose and scale.
9. Remove the supernatant (Conditioned media) when cells reach 75–85% confluency.
10. (Optional) Rinse with CellCor™ EXO CD to eliminate all remaining medium and the conventional cell culture medium.
11. When cells reach 85–90% confluency, collect the supernatant (Conditioned media) and isolate exosomes.
12. (Optional) If you need to obtain more Exosomes, change the media with new CellCor™ EXO CD as same volume of supernatant (Conditioned media) and incubate for 24–48 hours. Then, collect the supernatant (Conditioned media) and isolate exosomes.

■ Seeding with CellCor™ EXO CD Process

1. Process 1–7 are identical to that of Media Change Process.
2. Expand the initially cultured cells with CellCor™ MSC CD AOF (or traditional cell culture medium).
3. Seed to a flask for needed exosome production scale at density of with CellCor™ EXO CD.
4. When cells reach 85–90% confluency, collect the supernatant (Conditioned media) and isolate exosomes.
5. (Optional) If you need to obtain more exosomes, change the media with new CellCor™ EXO CD as same volume of supernatant (Conditioned media) and incubate for 24 – 48 hours. Then, collect the supernatant (Conditioned media) and isolate exosomes.

■ Thawing with CellCor™ EXO CD Process

1. Aliquot CellCor™ EXO CD inside a biosafety cabinet (BSC).
2. Thaw cryovial in a 37˚C water bath for 1–2 minutes.
3. Suspend the cells in CellCor™ EXO CD at a 1:9 ratio to the thawed cell pellet (Medium: 9, Cell Pellet:1).
4. Centrifuge the tube at 200–300 xg, RT for 3 minutes. Resuspend the cells with CellCor™ EXO CD and perform cell count.
5. Seed to a cultureware at density of with CellCor™ EXO CD.
6. Incubate at 37˚C in a humidified atmosphere of 5% CO_2.
7. Proceed to sub-culture when cells reach 75–85% confluency.
8. Expand the cultured cell and seed at a density of 4,000–5,000 cells/cm^2, depending on the purpose and scale.
9. When cells reach 85–90% confluency, collect the supernatant (Conditioned media) and isolate exosomes.
10. (Optional) To obtain more exosomes, change the media with new CellCor™ EXO CD as same volume of supernatant (Conditioned media) and incubate for 24–48 hours. Then, collect the supernatant (Conditioned media) and isolate exosomes.

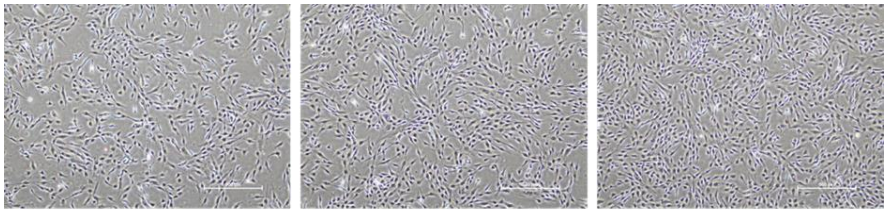

Figure 1. Cell Confluency

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