CellCor™ CD MSC

Product Data Sheets

XCELL

CellCor™ CD MSC

Human Mesenchymal Stem Cells

It is important to select an appropriate medium since it can affect cell properties.
CellCor™ CD MSC is the most ideal product to control culture conditions as it consists of chemically defined components.

CellCor™ CD MSC shows superior proliferation until late passages and stable stemness (Tri-lineage differentiation and expression of MSC markers) in addition to low senescence and genetic stability.

CellCor™ CD MSC can be used for various tissue-derived MSCs (Adipose tissue, Bone marrow, Umbilical cord, and Wharton's jelly, etc.), and is ideal for exosome research.

Product Overview

Product (Formulation)	**CellCor™ CD MSC** Chemically Defined (Recombinants / Synthetics)
Catalog	YSP002
Application	Cell culture and expansion
Cell Type	Human Mesenchymal Stem Cells (MSCs)
Storage	Under −20˚C (Expiry date on label)
Supplement	No supplement and coating reagent
Size	500 mL (Custom packaging available)
Area	For Research and Further Manufacturing Use

Why CellCor™ CD MSC?

Defined & Regulatory

Regulatory-friendly as it does not contain animal or human-derived components such as sera or hPL.

Stemness

Maintains stable stemness until late passages.
Genetic stability at the nuclear and chromosomal level in cell culture.

Consistency & Quality

Chemically defined products provide consistent products even in mass production.

Yield & Productivity

Excellent cell productivity with superior proliferation.

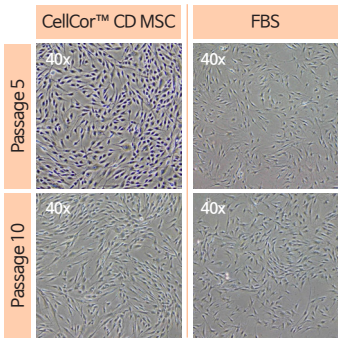
Reproducibility

Able to obtain highly reproducible experimental results.

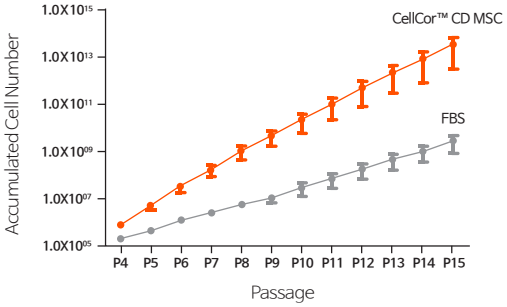
MSC Stemness

Superior & Standard Stem Cell Characterization

Cell Morphology



Proliferation



Colony Formation

(Passage 4)

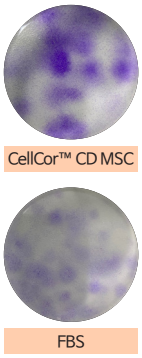


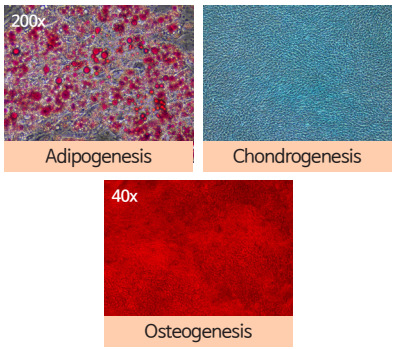
Figure 1. Superior Proliferation

AdMSCs cultured with CellCor™ CD MSC shows typical cell morphology, superior proliferation, and superior colony formation. (CellCor™ CD MSC : Chemically Defined Medium, FBS : FBS Containing Medium)

* Reference : Humana Press, 2008. 83-91

Tri-differentiation

(Passage 7)



MSC Marker

(Passage 7)

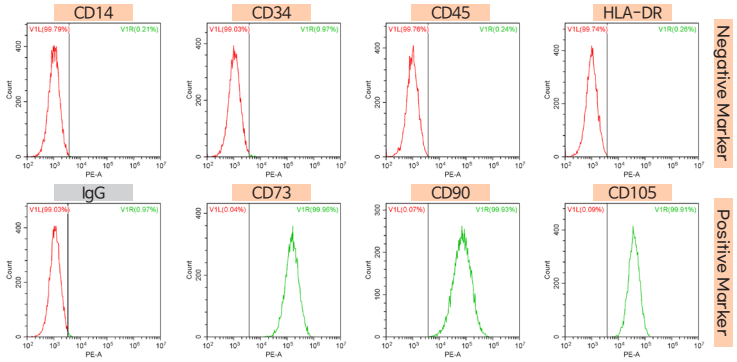


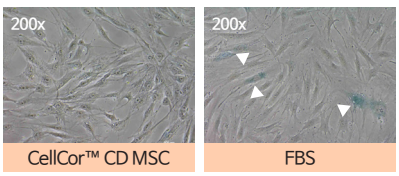
Figure 2. Stable MSC characterization

AdMSCs cultured with CellCor™ CD MSC maintains stemness : tri-lineage differentiation (adipogenesis, chondrogenesis, and osteogenesis) and MSC specific marker. (CD14, CD34, CD45, HLA-DR, CD73, CD90, and CD105) (Passage 7)

* Reference : Cytotherapy,21(10), 1019-1024

Senescence (Staining)

(Passage 5)



Senescence Marker(ODZ2)

(Passage 5)

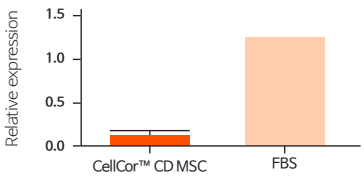


Figure 3. Low Senescence

AdMSCs cultured with CellCor™ CD MSC shows less b-galactosidase staining indicative of cellular senescence. (Passage 5) (CellCor™ CD MSC : Chemically Defined Medium, FBS: FBS Containing Medium)

* Reference : Cells. 2021 Jun; 10(6) : 1301.

Genetic Stability

Minimize loss of genetic information

Genetic Stability (Nucleus)

(Passage 5)

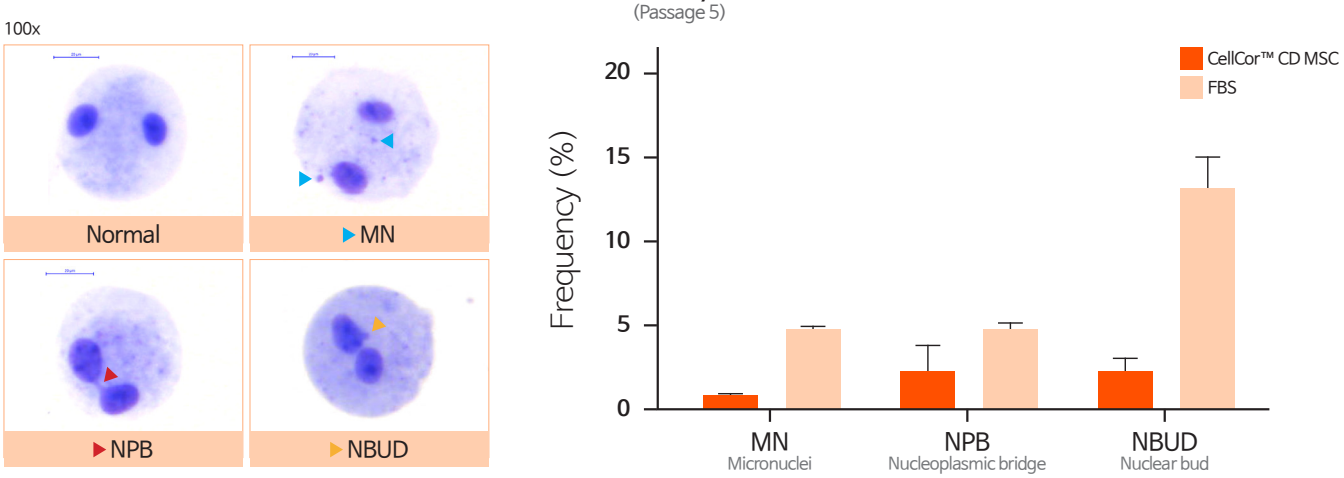


Figure 4. CBMN assay

AdMSCs cultured with CellCor™ CD MSC shows genetic stability at the nuclear level in cell culture. (Passage 6)
(CellCor™ CD MSC : Chemically Defined Medium, FBS: FBS Containing Medium)

* Reference : Cytotherapy, 21(10), 1019-1024.

Genetic Stability (Chromosome)

(Passage 5)

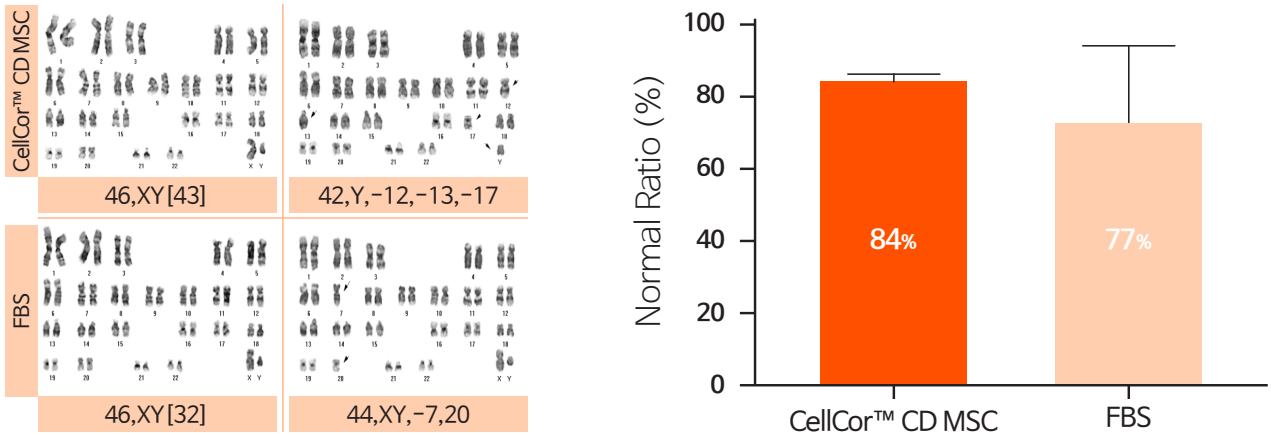


Figure 5. Karyotype analysis

AdMSCs cultured with CellCor™ CD MSC shows genetic stability at the chromosomal level in cell culture. (Passage 5)
(CellCor™ CD MSC : Chemically Defined Medium, FBS: FBS Containing Medium)

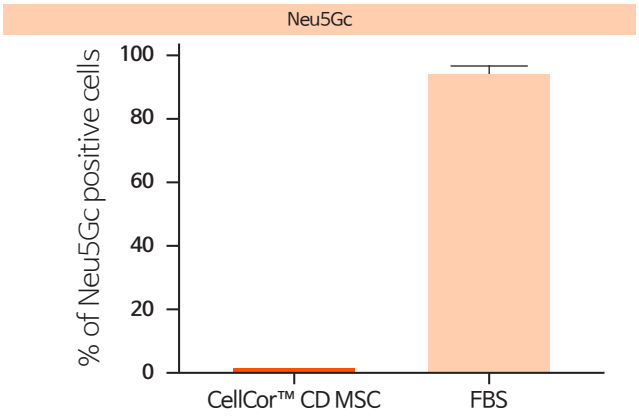
* Reference : Cytotherapy 18.3 (2016): 336-343.

Defined & Consistency

Unique features of Chemically Defined medium

Animal-derived Marker

(Passage 5)



Serum-related Marker

(Passage 5)

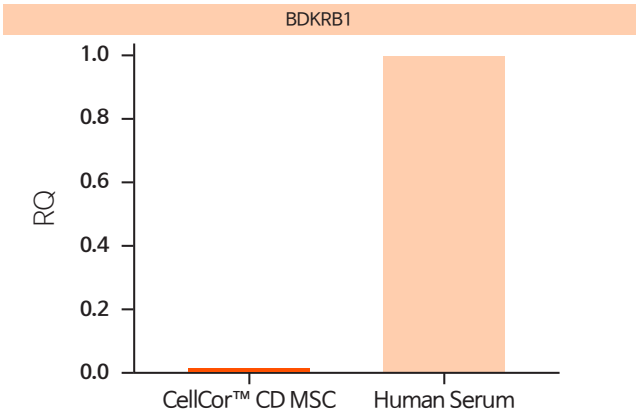


Figure 1. Superior Proliferation

CellCor™ CD MSC is a chemically defined medium that shows it does not contain serum or animal-derived components. (Passage 5, Neu5GC: Animal-derived marker, BDKRB1: Human-derived marker). (CellCor™ CD MSC: Chemically Defined Medium, FBS: FBS Containing Medium, Human Serum: Human Serum Containing Medium)

* Reference : Tissue Eng Part A, 2010. 16(4): p. 1143-55 / *international journal of medical sciences* 16.8 (2019): 1102.

Lot to Lot Variation

(Lot# N = 5)

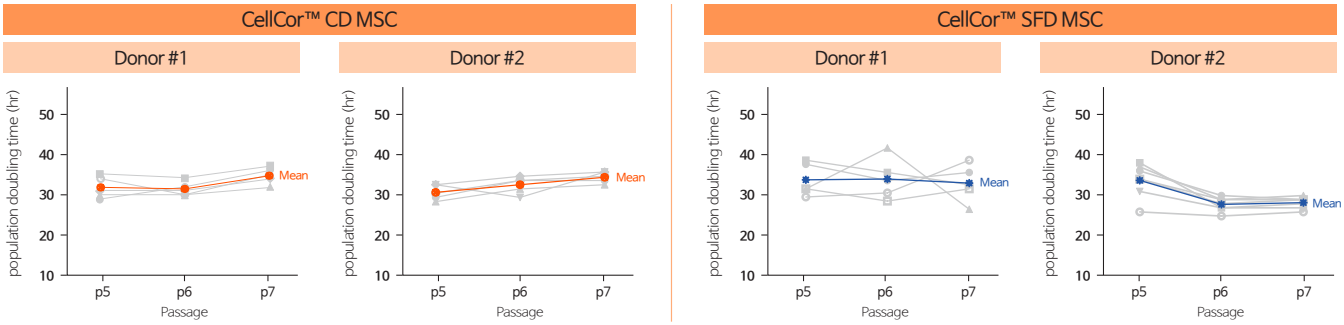


Figure 2. Consistency

CellCor™ CD MSC, Chemically defined medium, shows little variation as it does not contain animal-or human-derived components. It can improve the reproducibility of the experiment. (compared to serum-free medium: CellCor™ SFD MSC)

General & Universal

Applicable to various cell types

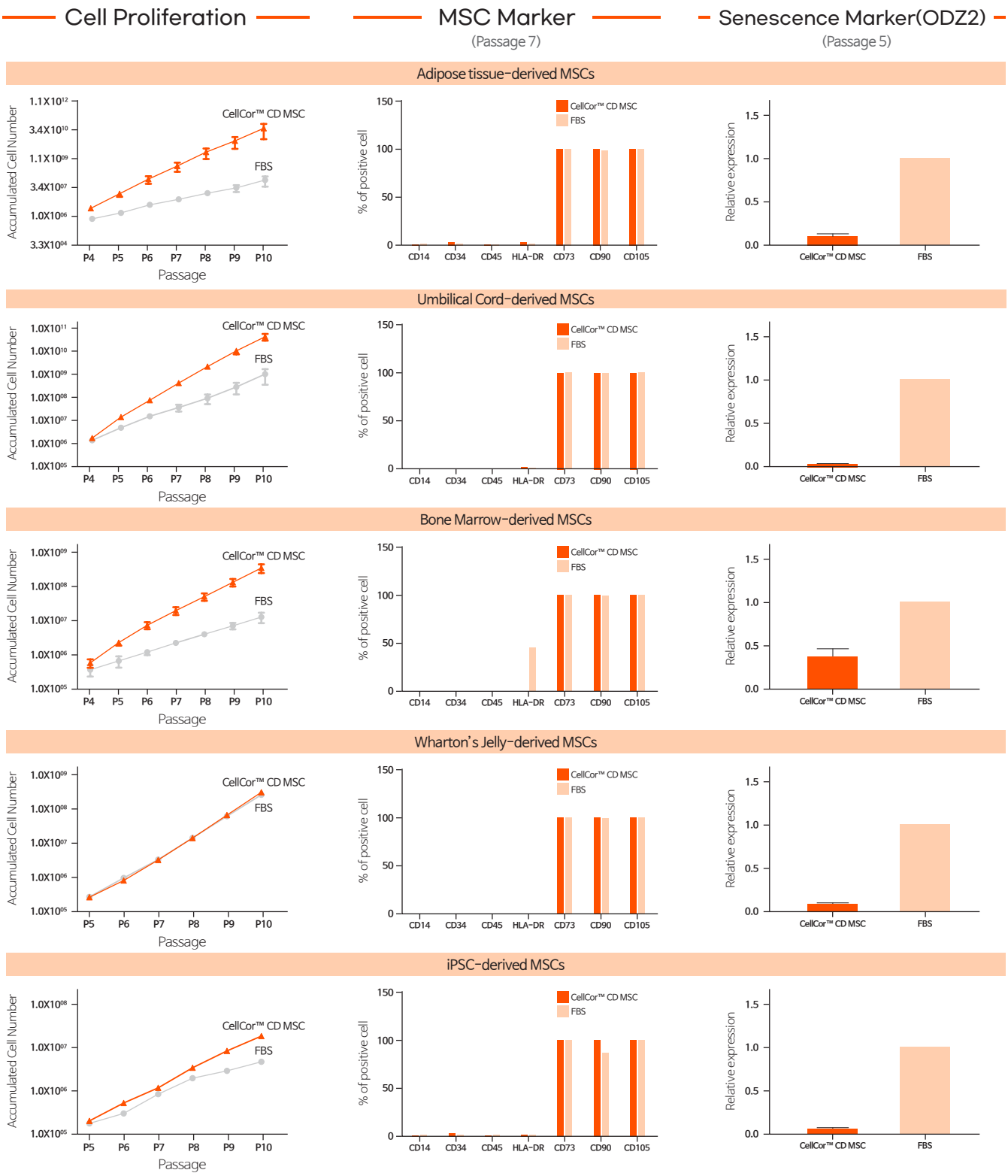
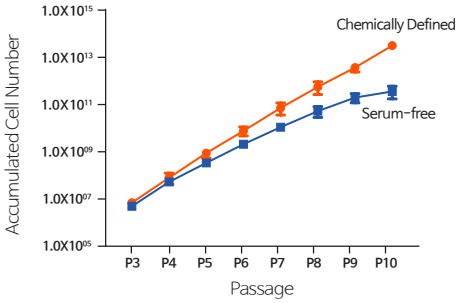


Figure 1. Characteristics of MSC from various tissue source

CellCor™ CD MSC could be cultured in various tissue-and cell-derived sources. (Adipose tissue, Umbilical cord, Bone marrow, Wharton's Jelly, iPSC) and shows to maintain stemness. (CellCor™ CD MSC : Chemically Defined Medium, FBS : FBS Containing Medium, Human Serum : Human Serum Containing Medium)

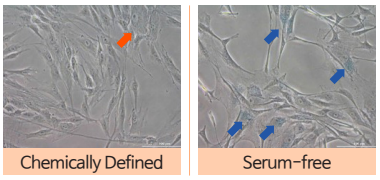
Chemically Defined vs Serum-free Media

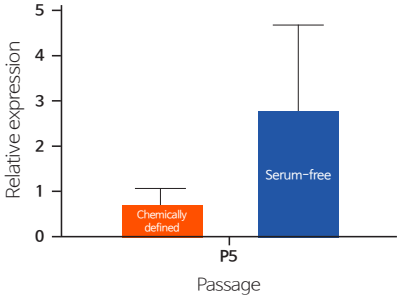
Cell Proliferation



Senescence Staining

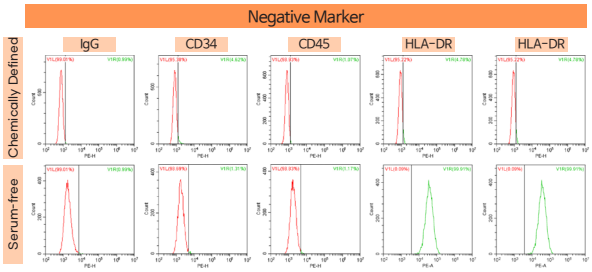
(Passage 5)





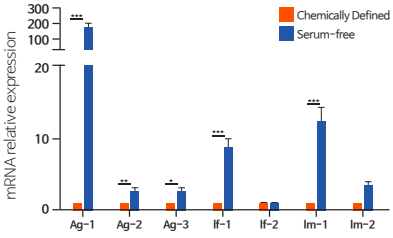
MSC Marker

(Passage 5)



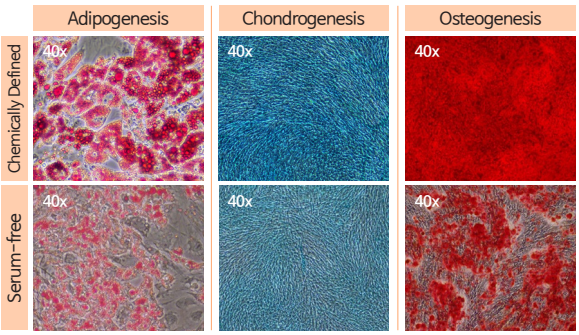
DEG

(Differentially Expressed Genes) (Passage 5)



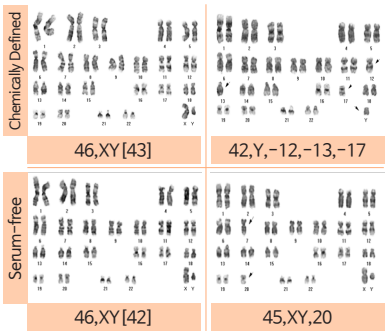
Tri-differentiation

(Passage 5)



Genetic Stability

(Passage 5)



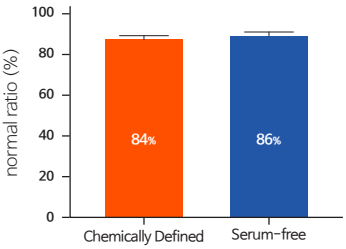
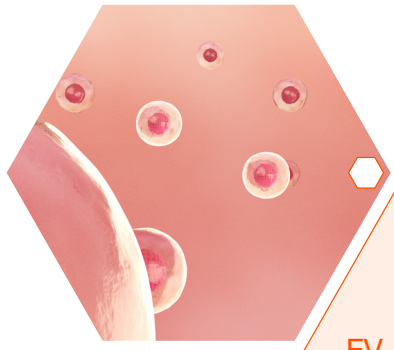


Figure 1. Compare MSC characterization to Serum-free Medium

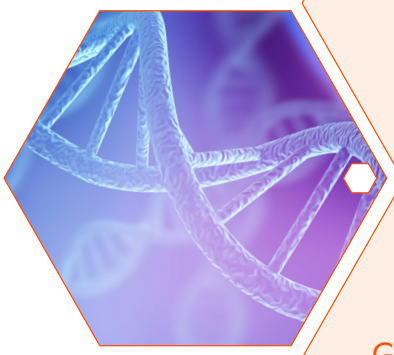
Comparing with serum-free medium (Commercial product) AdMSCs cultured with CellCor CD MSC show superior cell proliferation, stable stemness, low senescence. Also, It shows low expression of immune- and inflammatory-related gene, and cell culture of genetic stability. (Passage 5, Ag-1 : IGFBP5, Ag-2 : Endoglin, Ag-3 : SOD2, If-1 : TNFRSF11B, If-2 : CSF1, Im-1 : CXCL12, Im-2 : PTX3)

CellCor™ CD MSC Applications

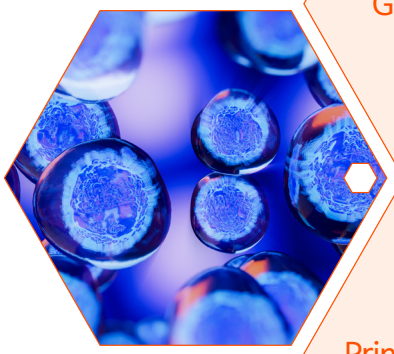


EV / Exosome Product

2D / 3D Bioreactor,
Mass Culture



Gene Modification



Priming / Conditioning

XCELL

CellCor™ is a chemically defined medium specifically for cell culture.
With CellCor™ CD MSC as a start, we are constantly developing ways to expand
our product line to various cell specific chemically defined medium.

Technical Support

E. ts@xcell.co.kr

Website Resources

Material Safety Data Sheets (MSDS)
Certificate of Analysis (CoA)
Product Information Sheets (PIS)
Product Manual Video
FAQs

Xcell Therapeutics

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