Human MSC-derived Exosome Collection Medium

CellCor™ EXO CD

FBS-containing media are prevalent in the industry for exosome extraction. However, impurities present in exosomes are the major hurdle in the development of therapeutic and cosmetics. CellCor™ EXO CD, a serum-free chemically defined medium, allows for the isolation of pure MSC-derived exosomes. CellCor™ EXO CD was developed to overcome the disadvantages of FBS-containing and XF media, aiming to provide convenience to researchers.

- **Serum-free medium with chemically defined ingredients:** BSA-free, ensuring high purity of exosomes
- **Exosome-free:** Low level of background particles; refrigerated to eliminate impurities arising from thawing
- **Convenient:** No need for media replacement steps prevents contamination risks; reduces time/costs in isolation/purification steps due to the absence of FBS and hPL-derived ingredients during exosome harvesting.
- **High Performance:** As a medium suitable for MSC cultivation, it enables a high yield of exosomes even from a small cell count, facilitating large-scale production of exosomes with high activity and potency.

FIGURE 1

Comparison of background particle counts

The co-medium assay showed a low level of background particles, enabling exosome analysis without external contamination (**p<0.01)

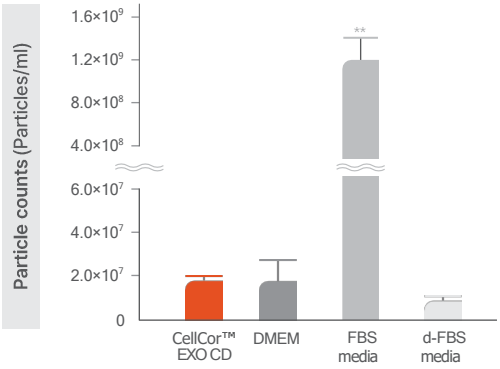


FIGURE 2

Cell count comparison at the time of conditioned media harvest

Stable cell growth allows for stable exosome recovery. (final cell count after starting culture with 1×10^5 cells)

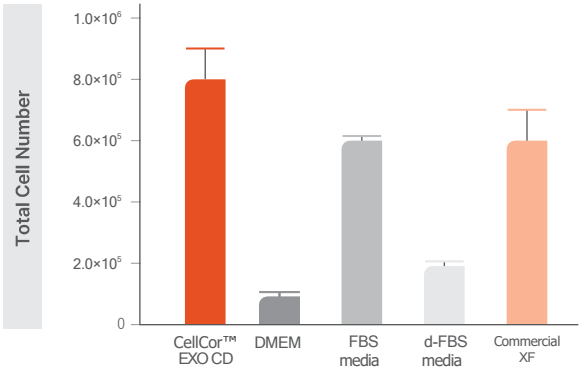


FIGURE 3

Morphology

CellCor™ EXO CD can also be used for MSC culture, maintaining stable cell conditions during exosome collection.

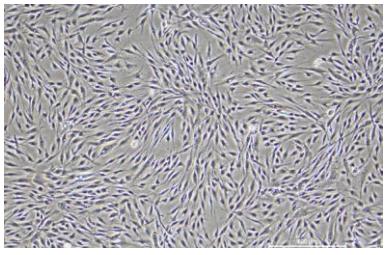
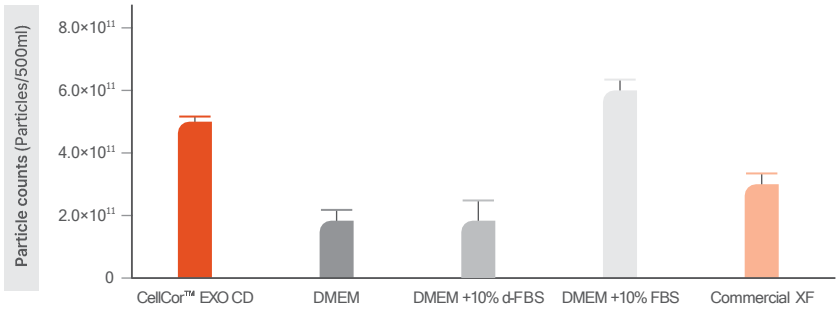


FIGURE 4

A comparison experiment of exosome yields by cell culture media

In comparison tests with commercial media, CellCor™ EXO CD demonstrated the highest yield of exosomes.
(based on protocols for each medium).



Application

As important as the yield of exosomes is their potency.
Even when processing the same quantity of exosomes, those with higher purity exhibit better efficacy.

Exosomes harvested using CellCor™ EXO CD demonstrate superior effectiveness.

FIGURE 5

Angiogenesis assay

Demonstrated angiogenic effect is equal to or greater than that of FBS(+) medium and commercial media.

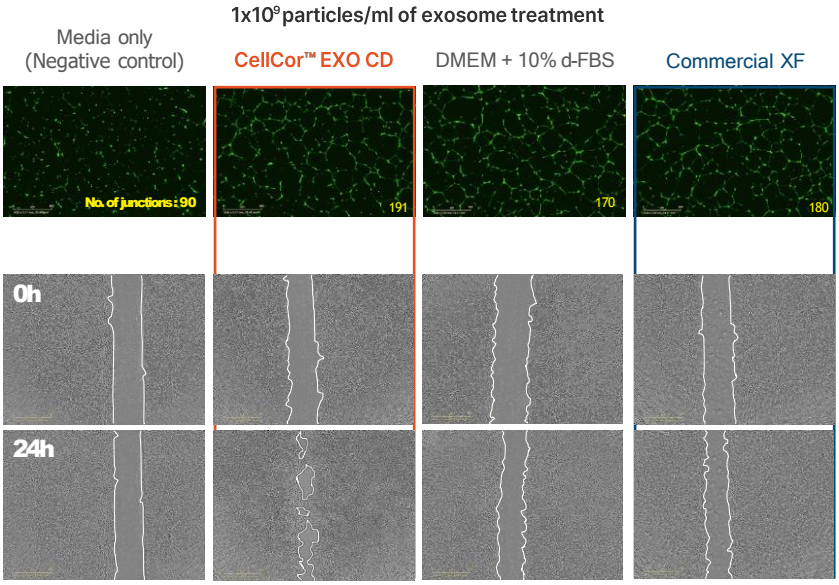


FIGURE 6

Wound healing assay

Demonstrated higher wound healing when compared with FBS(+) and commercial media, indicating higher therapeutic potential

FIGURE 7

Efficacy tests of functional cosmetic ingredients

Higher expression levels of hyaluronic acid and procollagen than those of exosomes extracted from other media when treated with the same amount of exosomes (**p<0.005, ***p<0.001)

