FUJIFILM
Value from Innovation

Wako

EV-Up™
EV Production Basal Medium for MSC, AF
MSC EV Production Supplement, AF

1. Provides higher EV yield compared to conventional serum-containing media
2. Enables production of EVs with high activity
3. Maintains MSC viability in culture

EV-Up™ media is a culture medium specifically designed for the production of exosomes (EVs) from mesenchymal stem cells. The medium is prepared by combining “EV-Up™ Production Basal Medium for MSC, AF” and “EV-Up™ MSC EV-Production Supplement, AF”, resulting in a serum and animal free medium applicable to any growth media.

Products information
Basal medium and supplement are intended to be used as a set.

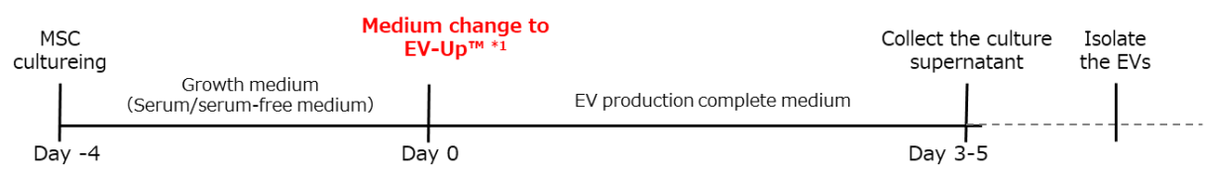
Code No.	Product name	Grade	Pkg. size
053-09451	EV-Up™ EV Production Basal Medium for MSC, AF Ref	For cell culture	95mL
298-84001	EV-Up™ MSC EV Production Supplement, AF F		For 100mL

Applicable cells

The complete medium is applicable for MSCs derived from various tissue sources.

bone marrow, umbilical cord, adipose tissue etc.

Procedure



*1 The complete media composed of EV-Up™ EV Production Basal Medium for MSC, AF and EV-Up™ MSC EV Production Supplement, AF.

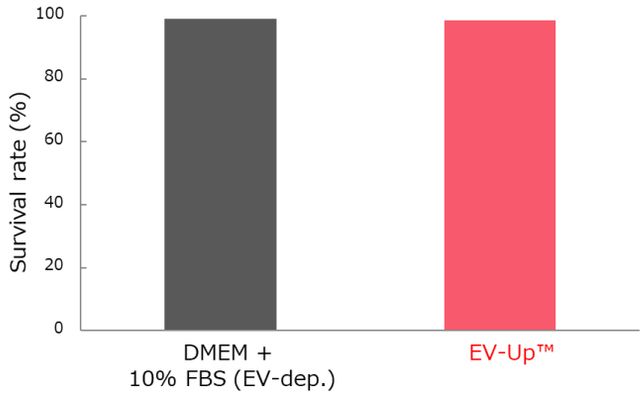
The collected EVs can be isolated by the PS affinity method*2 using MagCapture™ Exosome Isolation Kit PS Ver.2 (Code No. 290-84103).

*2 EVs are captured specifically by phosphatidylserine (PS)-binding proteins and metal ions, and eluted with chelating reagent.

Application data

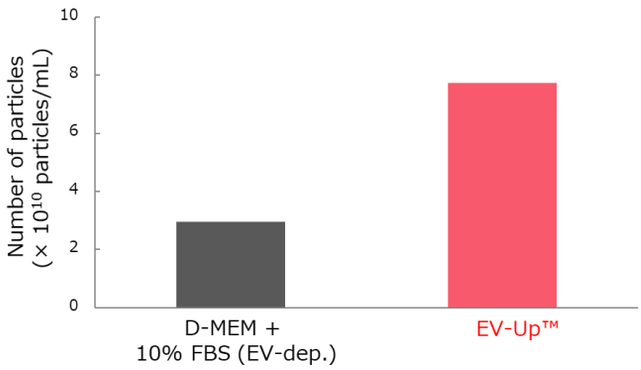
1. Cell Viability

The impact of EV-Up™ on cell viability was measured using human bone marrow derived MSC. Cells were first expanded in serum-containing medium, and then cultured for in EV-Up™ for five days prior to survival rate estimation.
In result, both condition showed similar survival rates.



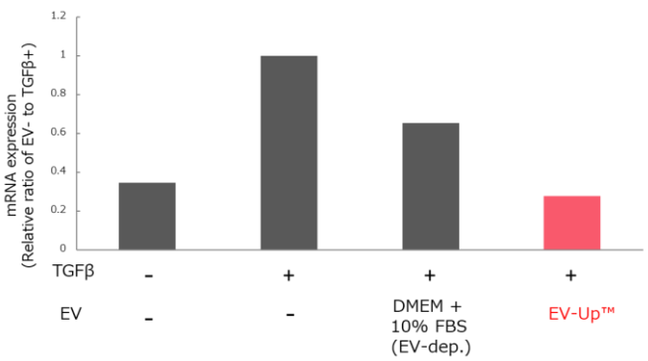
2. Number of EVs particles

EVs isolated from various cell culture supernatants by the PS affinity method were analyzed with NTA.
In result, MSC cultured in EV-Up™ released 2.6 times more EVs than MSC cultured in DMEM+10% EV-depleted FBS. And the diameter of EVs was comparable.



3. Anti-fibrotic Effect

5×10^8 particles/mL of EVs isolated by the PS affinity method from various cell culture supernatants were added to normal human fetal lung-diploid fibroblasts cells (TIG3) that were stimulated by TGFβ, for subsequent quantification of the fibrotic marker expression (αSMA) by RT-PCR.
In result, EVs produced in EV-Up™ significantly decreased the gene expression of fibrotic marker, such as αSMA.



FUJIFILM Wako Laboratory Chemicals site
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