SUPERCULTURE hMSC Primary Culture Enhancer

Cat#: 6122133

[Product Name]

hMSC Primary Culture Enhancer

[Product Description]

hMSC Primary Culture Enhancer is an animal serum-free, xenogene-free cell culture supplement, which is suitable for the primary isolation and culture of human umbilical cord-derived MSCs, which can promote the derivation of primary MSCs out of tissue explants and thus increase the number of primary MSC cells harvested.

[Model & Specification]

Product Name	Cat No.	Size	Quantity
hMSC Primary Culture Enhancer	6122133	10 mL/bottle	1 bottle

[Storage Conditions and Validity Period]

Store at -15℃~-25℃ away from light, valid for 3 years.

[Product Features]

● Animal serum-free, xenogene-free, and less inter-batch difference.
● The product can increase the number of primary MSC cells harvested when used together with the sustaining expansion medium GF20 Plus Xeno-Free SFM.
● This product is GMP Grade and can be used for subsequent manufacturing or laboratory research.

[Directions for Use]

1. Thaw the product in the refrigerator at 4℃ overnight or at room temperature for 30 minutes. Prepare complete medium by adding 1 mL primary culture enhancer into 49 mL maintenance expansion medium. Rewarm complete medium for later use. Sterilize medical scissors, tissue tweezers, scalpels and other instruments in advance for later use.
2. The umbilical cord is cleaned 3 times with DPBS containing penicillin-streptomycin and then cleaned with DPBS without penicillin-streptomycin until the waste solution is bloodless.
3. Discard both ends of the umbilical cord, divide the umbilical cord into 2~4 cm tissue segments with scissors, and each tissue segment is cut along the umbilical cord vein.
4. Scrape off the endometrium of the umbilical cord vein with a scalpel, tear off the umbilical cord integument and two arteries with tissue forceps, so that the Wharton's Jelly is fully exposed and the Wharton's Jelly around the two arteries can be peeled off with tissue forceps.
5. Mince the Wharton's Jelly into 1~3 mm umbilical cord tissue homogenate, transfer the umbilical cord homogenate to a 50 mL centrifuge tube, add complete medium to submerge the homogenate, and mix it thoroughly.
6. Add 5 mL of complete medium to T75 culture flask so that the medium can completely cover the entire bottom surface. Transfer the chopped umbilical cord homogenate to the culture flask (about 1 mL/flask) evenly according to the amount. Shake the flask to distribute the explant pieces evenly, and place them in a 37℃ incubator. Do not shake the flask during the period, so that the attachment of explant pieces is not disturbed.
7. Change the medium after first 3 days of culture. Then, change the medium every 3 days. Tilt the culture flask slightly when changing the medium. Remove old medium until about 1 mL of medium remained. Then add 3 ~ 5 mL of fresh complete medium into the flask. Usually, primary cells can be observed derived of the explant pieces after 7 days of culture.

8. Primary cells are harvested in 12~14 days.

Harvesting cells is performed as follows:

9. Place the culture flask on the table, keep the flask flat and shake it gently from side to side. Most of the tissue pieces will detach. If there are still some attached tissue pieces, you can poke or aspirate them with a pipette or pipette tip.(The detached tissue pieces can be collected for bacterial testing, mycoplasma testing, etc.)

10. Aspirate the medium from the flask, add approximately 10 mL of DPBS along the opposite wall of the flask (to avoid washing the cells off) into the flask and shake it gently. Repeat the step to wash the cells.

11. Aspirate the residual liquid,and add trypsin (0.05%) to the flask. Spread the digestion solution evenly to cover the entire bottom of flask. When the cells become round and separate, tap the flask and add 10 mL of fresh medium to terminate digestion.

12. Pipette the cell suspension and transfer it to a centrifuge tube, centrifuge at 210 g, RT for 4 minutes. Remove the supernatant and resuspend the cells in complete medium and count the number of cells.

13. Inoculate the primary cells according to the desired density and subculture MSCs.

[Notes]

● If the product cannot be used up at one time, it can be aliquoted and frozen to avoid repeated freezing and thawing. Please use it within the validity period of the product, and pay attention to aseptic operation when using.

● The promoting effect of primary cell culture of this product may vary depending on umbilical cord source, storage conditions, sample quality and operator experience, etc.

[Description of Product Symbol]

Product Symbol	Description	Product Symbol	Description
REF	Catalogue number	LOT	Batch code
	Date of manufacture		Manufacturer
	Use-by date		Temperature limit
	Consult instructions for use		

[Related Products]

Product Name	Cat No.	Specification
GF20 Plus MSC Xeno-Free SFM	6914132/6914142	500 mL/Kit
Serum-Free Cell Freezing Medium	6032011	100 mL/bottle

[Instruction Revision Date]

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[Company Information]

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