COSMO BIO CO., LTD.
Inspiration for Life Science

For research use only. Not for clinical diagnosis.

Catalog No. PMC-BMMC-COS

Monocyte Precusor Cell V-1 (Rat)

(Rat Cryopreserved Cell)

Principle

Monocytes are produced by the differentiation of monocyte precursor cell in bone marrow. In tissue, monocytes mature into macrophages and are involved in immunity, recovering tissues and etc. Monocyte Precursor Cell V-1 (Rat, PMC-BMMC-COS) contains frozen monocyte precursor cells derived from rat bone marrow, and the cells can be differentiated into mature monocytes using Wash Medium (PMC-BMMW-COS) and Culture Medium (PMC-BMMG-COS).

Components

Product Name/Code No.	Size	Quantity	Storage Conditions	Stability
Monocyte Precursor Cell, Rat (Code No. PMC-BMMC-COS)	2.0 x10^6 cells	1	Liquid Nitrogen	1 year

* Shipping : dry ice

Materials required but not provided

- Variable volume pipettes
- Wash Medium (PMC-BMMW-COS)
- Culture Medium (PMC-BMMG-COS)
- Culture plates

Precautions

1. Read the instructions carefully before beginning the culture.
2. This kit is for research use only, not for human or diagnostic use.
3. Upon receiving, cryovials are immediately transferred to and stored in liquid nitrogen until ready to use.
   It is recommended to use Monocyte Precursor cell vial immediately upon receiving.

Protocol

1. Thaw Wash Medium (PMC-BMMW-COS) and Culture Medium (PMC-BMMG-COS) in a 37°C water bath with gentle shaking.
2. Quickly place Monocyte Precursor Cell vial in a 37°C water bath until its content is completely thawed.
3. Transfer thawed cells into a 15 ml centrifuge tube containing 10 ml of Wash Medium and centrifuge at 4°C at 400x g for 5 minutes to pellet the cells.
4. Remove the supernatant, and re-suspend cells in 10 ml of Wash Medium and centrifuge at 4°C at 400x g for 5 minutes.
5. Remove the supernatant, and re-suspend the cell pellet in a total volume of 5 ml of Culture Medium.
6. Transfer the cell suspension to culture plate (5ml/6cm dish or 1ml/well/24well-plate) and incubate at 37°C in a 5% CO2, humidified incubator.

* Low cell binding culture plates such as HydroCell (CellSeed Inc.), are recommended to culture monocytes as the cells are capable of strongly adhering to normal culture plates.

* The size of cells is about several micrometers in the first cell culture and may reach 10 micrometers in days 3-4 days of culture (Figure 1). When cells are cultured for a period of time they are able to form several tens of colonies.

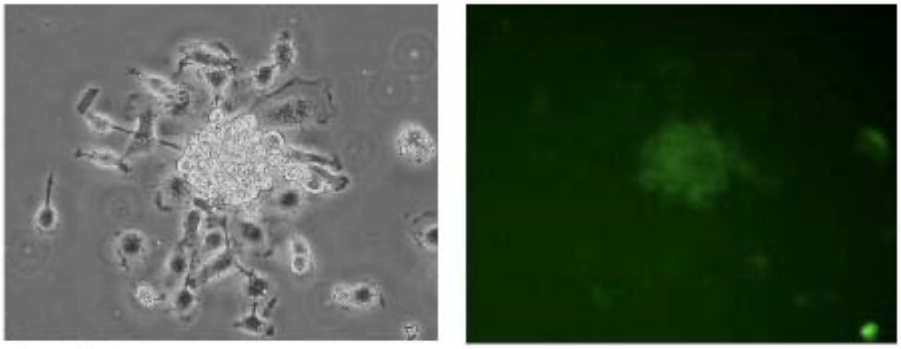

Figure 1

References

(1) Sunao Takesita, Keisuke Kaji, Akira K udo. Identification and Characterization of the Ne w Osteoclast Progenitor with Macrophage Phenotypes Being Able to Differentiate into Mature Osteoclasts. JOURNAL OF BONE AND MINERAL RESEARCH Volume 15, Number 8(2000) .1477-1488

Manufactured by **Primary Cell Co., Ltd.**

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