CSI083Ra01

Primary Rat Bone Marrow-derived Mesenchymal Stem Cells (BMMSCs)

Organism Species: Rattus norvegicus (Rat)

Instruction manual

FOR RESEARCH USE ONLY
NOT FOR USE IN CLINICAL DIAGNOSTIC PROCEDURES

2nd Edition (Revised in Aug, 2022)

[DESCRIPTION]

Cell Type: Mesenchymal Stem Cells

Synonyms: BMMSCs

Species: Rattus norvegicus (Rat)

Tissue Source: Bone marrow

Size: >5×10^5cell/vial

[PROPERTIES]

Cell activity: >85% (Viability by Trypan Blue Exclusion).

Formulation: Frozen 1 mL or T25 flask.

Biosafety: Negative for HIV-1, HBV, HCV, mycoplasma, bacteria, yeast and fungi.

Applications: For research use only. It is not approved for human or animal use, or for application in clinical diagnostic procedures.

Growth Properties: Adherent

[CONTENTS]

Form & Buffer: Supplied as solution form in frozen stock solution, containing 90% FBS+10% DMSO.

[USAGE]

Upon receiving the cells in a T-25 flask at room temperature, immediately transfer the cells to 37°C, 5% incubator; the cells in vials, directly and immediately transfer the cells from dry ice to liquid nitrogen.

Culture conditions:

DMEM/F12+5% FBS+1% Mesenchymal Stem Cell Growth Supplement+1% Penicillin-Streptomycin Solution

Temperature: 37°C

Condition: 95% air, 5% carbon dioxide

Cell recovery:

After receiving the cells, shake at 37°C in a water bath until completely dissolved, transfer to a 15 ml centrifuge tube, add 3-5 times complete culture solution, 1000 rpm for 5 min, discard the supernatant, and place in a T25 flask for culture.

Cell passage:

1. Cell passage when cell growth at 85-95%.

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2. Discard the medium and wash with PBS 1-2 times.
3. Add 1 ml of Trypsin at 37°C, observe the cell under the microscope. If the cells are retracted and rounded, pat the culture flask to let the cells fall off. Stop digestion by adding 2 ml of complete medium containing 10% serum. Make it a single cell suspension.
4. Add the fresh medium to resuspend the cells. Unless otherwise stated, the recommended ratio of primary cells is 1/2-1/3.

[Shipping]

Dry ice.

[STORAGE]

Upon receiving, directly and immediately transfer the cells from dry ice to liquid nitrogen and keep the cells in liquid nitrogen until they are needed for experiments.

[IMPORTANT NOTE]

The cell is for research use only, and we will not be responsible for any issue if the cell was used in clinical diagnostic or any other procedures.

[Figure]

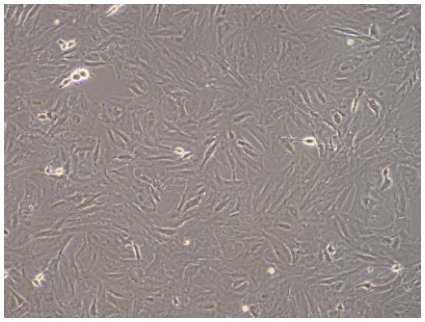

Figure 1

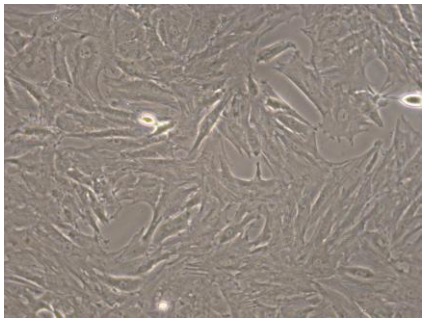

Figure 2

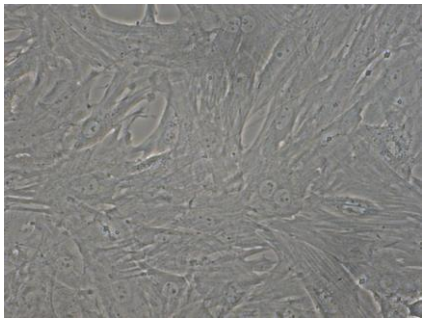

Figure 3

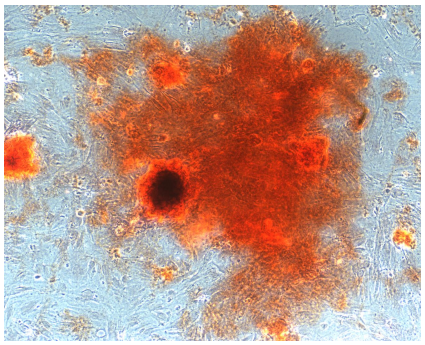

Figure 4

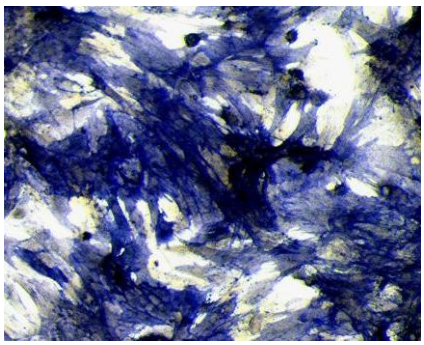

Figure 5

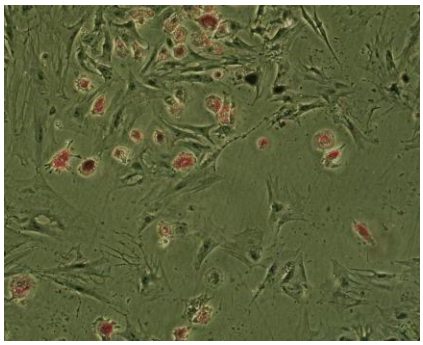

Figure 6

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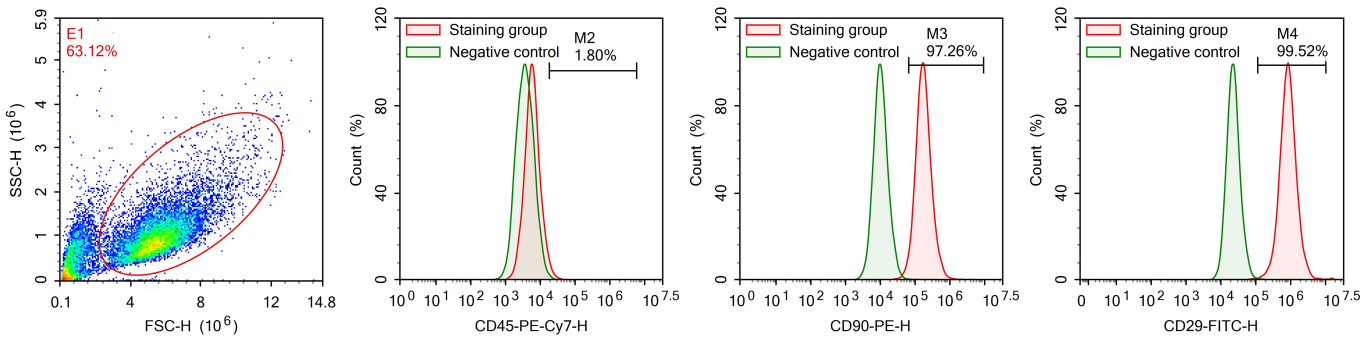

Figure 7

Figure 1 Morphology of P2 Rat BMMSCs (Optical microscope,×100)

Figure 2 Morphology of P2 Rat BMMSCs (Optical microscope,×200)

Figure 3 Morphology of P2 Rat BMMSCs (Optical microscope,×400)

Figure 4 Alizarin red staining of Rat BMMSCs after osteogenic induction (Optical microscope,×100)

Figure 5 Alkaline phosphatase(ALP) staining of Rat BMMSCs after osteogenic induction (Optical microscope,×100)

Figure 6 Oil red O staining of Rat BMMSCs after adipogenic induction (Optical microscope,×100)

Figure 7 The analysis of cell surface phenotype indicated that Rat BMMSCs population were positive for CD90 and CD29, whereas negative for CD45 by flow cytometric.

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