



CSI083Mu01

**Primary Mouse Bone Marrow-derived Mesenchymal Stem Cells (BMMSCs)**

**Organism Species: Mus musculus (Mouse)**

***Instruction manual***

FOR RESEARCH USE ONLY

NOT FOR USE IN CLINICAL DIAGNOSTIC PROCEDURES

2nd Edition (Revised in Dec, 2023)

## [ DESCRIPTION ]

**Cell Type:** Mesenchymal Stem Cells

**Synonyms:** BMMSCs

**Species:** Mus musculus (Mouse)

**Tissue Source:** Bone marrow

**Size:**  $>5 \times 10^5$  cell/mL

## [ 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:**

L-DMEM+10% FBS+1% 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%.
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 ]

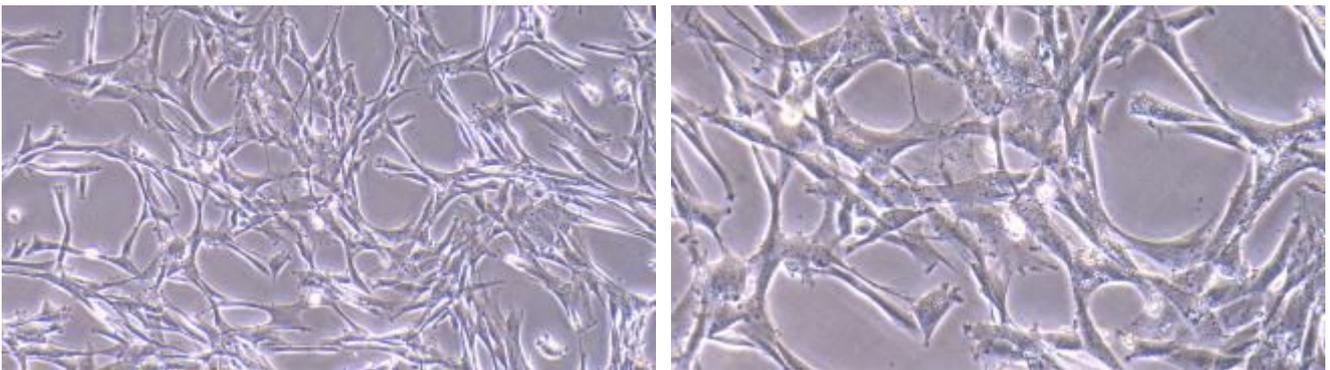


Figure 1

Figure 2

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

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

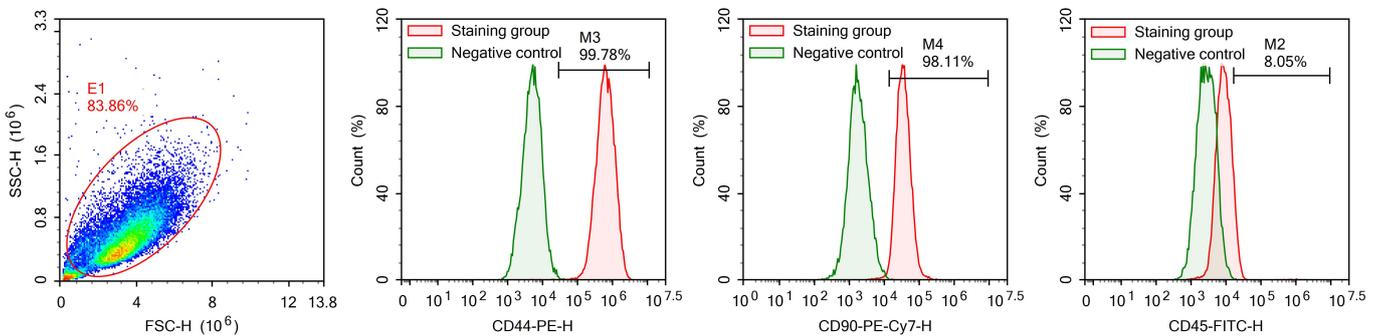


Figure 3

Figure 3 The analysis of cell surface phenotype indicated that Mouse BMMSC population was positive for CD90 and CD44, whereas negative for CD45 by flow cytometric.

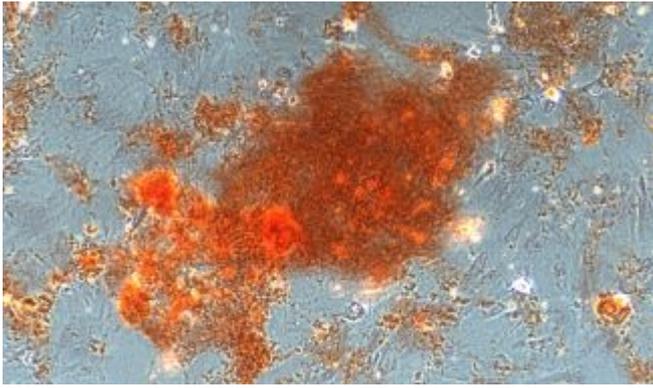


Figure 4

Figure 4 Alizarin red staining after osteogenic induction (Optical microscope)

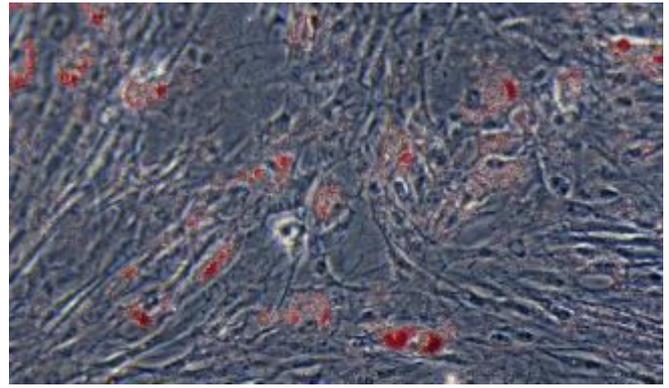


Figure 5

Figure 5 Oil red O staining after adipogenic induction (Optical microscope)