

# Certificate of Analysis

**Strain Balb/c Mouse Mesenchymal Stem Cells**

Catalog No. MUCMX-01001

Lot Number: 110602H01

Cryopreservation Date: 2011-6-2

Passage Number: 6

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## Viability

Cells are assayed for viability post-thaw using vital staining assay with trypan blue.

Specification: Cells should exhibit 80% viability.

## Sterility

Bacterial and Fungal Contamination: Samples are inoculated and cultured in blood agar plate, thioglycolate broth, tryptocase soy broth and sabouraud dextrose agar.

Specification: No growth must be observed.

Mycoplasma: Samples are tested for mycoplasma contamination using a PCR-based assay and direct culture.

Specification: Results must be negative.

Endotoxin: Samples are tested for endotoxin contamination with LAL test.

Specification: Results must show 25EU/ml.

## Purity

Cells are assayed for purity using flow cytometric analysis of cell surface antigen expression after cryopreservation. Cells are immunofluorescently stained with fluorochrome-conjugated antibodies specific to cell surface antigens CD29, CD34, CD44, CD117 and Sca 1.

Specification: Cells must show 70% positivity for expression of cell surface antigens CD29, CD44, CD34 and Sca-1. Cells must show 5% positivity for expression of cell surface antigens CD117.

## Proliferation Ability

Cells are characterized by their ability to proliferate in culture with an attached well-spread morphology for 5 passages, and 5% cells exhibit spontaneous differentiation in each passage.

## Differentiation Ability

Cells are assayed after cryopreservation for their ability of tri-lineage differentiation. Cells must be able to differentiate to osteocytes, adipocytes and chondrocytes when cultured in the appropriate differentiation media.

**Results:**

Meet all specifications

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*Jane Chen*

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Jun 30, 2011