India Contact:
Life Technologies (India) Pvt. Ltd.
Mobile: +91-9810521400, Ph: +91-11-42208000
Email: customerservice@lifetechindia.com
Web: www.lifetechindia.com

Mouse Stromal Vascular Fraction

Catalog Number	10MU-008 (Brown fat) 10MU-009 (White fat)	**Cell Number**	1.0 million cells/vial
Species	*Mus musculus*	**Storage Temperature**	Liquid Nitrogen

Description

Mouse stromal vascular fraction (SVF) is freshly isolated heterogeneous cell fraction derived from the brown adipose tissue (BAT, brown fat) or white adipose tissue (white fat) [1]. Although not a fully defined cell population, the SVF includes vascular smooth muscle cells, fibroblasts, mast cells, macrophages, lymphocytes, endothelial cells, preadipocytes, and adipose-derived stromal/stem cells (ASCs). There is an increasing interest in the biology and therapeutic potential of SVF because of the direct and rapid isolation procedure in a xenobiotic-free environment [2].

iXCells Biotechnologies provides high quality Mouse stromal vascular fraction (SVF), which are isolated from inguinal white fat tissue (Cat# 10MU-009) or interscapular brown fat tissue (Cat# 10MU-008). The cells were cryopreserved at P0, with ≥1.0 million cells in each vial. The characterization was performed by culturing the cells using Adipose-derived Stem Cells Growth Medium (Cat# MD-0003) followed by CD29 staining (Figure 1). mSVF is negative for mycoplasma, bacteria, yeast, and fungi and can be cultured no more than 3 passages using Adipose-derived Stem Cells Growth Medium (Cat# MD-0003) under the condition suggested by iXCells Biotechnologies. Extensive expansion was not recommended because the cells may lose their multipotent properties.

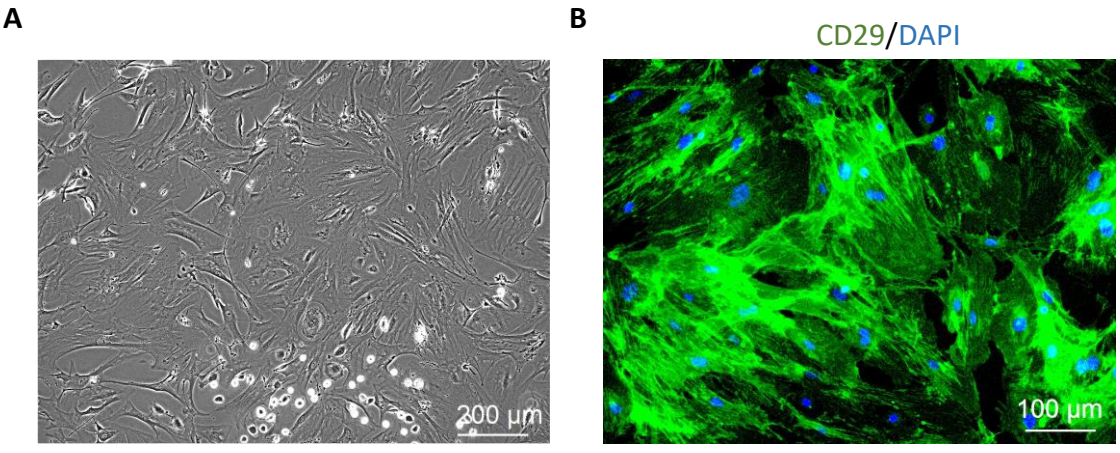

Figure 1. mSVF(white fat) was recovered and cultured using Adipose-derived Stem Cells Growth Medium (Cat#MD-0003) for 7 days. (**A**) Phase contrast image. (**B**) ICC staining using CD29 antibody.

Product Details

Tissue	C57BL/6 or BALB/C mice inguinal white fat or interscapular brown fat tissue
Package Size	1.0 million cells/vial
Passage Number	P0
Shipped	Cryopreserved
Storage	Liquid nitrogen
Growth Properties	Adherent
Media	Adipose-derived Stem Cells Growth Medium (Cat# MD-0003)

Protocols

Thawing of Frozen Cells

1. Upon receipt of the frozen cells, it is recommended to thaw the cells and initiate the culture immediately in order to retain the highest cell viability.
2. To thaw the cells, put the vial in 37°C water bath with gentle agitation for ~1-2 minutes. Keep the cap out of water to minimize the risk of contamination.
3. Pipette the cells into a 15 mL conical tube with 5 mL fresh **Adipose-Derived Stem Cell Growth Medium** (Cat# MD-0003).
4. Centrifuge at 1,000 rpm (~220 *g*) for 5 minutes under room temperature.
5. Remove the supernatant and resuspend the cells in desired volume of Adipose-Derived Stem Cell Growth Medium.
6. Culture the cells in T75 flask or the desired culture vessel. Change the medium every other day until cells reach 80-90% confluence. We recommend seeding at 1.0×10^4 cells/cm^2.

Safety Precaution: *it is highly recommended that protective gloves and clothing should be used when handling frozen vials.*

Standard Culture Procedure

1. When cells reach ~80-90% confluence, remove the medium, and wash once with sterile PBS (5 mL/T75 flask).
2. Add ~2.5 mL of 0.05% Trypsin-EDTA to the flask and incubate for ~3 minutes at 37°C. Neutralize the enzyme by adding 2-3 volumes of cell culture medium.
3. Centrifuge at 1,000 rpm (~220 *g*) for 5 minutes and resuspend the cells in desired volume of Adipose-Derived Stem Cell Growth medium.
4. Seed in the new culture vessels at $0.5\text{-}1 \times 10^4$ cells/cm^2. Change the medium every other day until cells reach 80-90% confluence.

Reference

[1] Weisberg SP, McCann D, Desai M, et al. (2003) Obesity is associated with macrophage accumulation in adipose tissue. J Clin Invest. 112:1796–1808.

[2] Caspar-Bauguil S, Cousin B, Galinier A, et al. (2005) Adipose tissues as an ancestral immune organ: Site-specific change in obesity. FEBS Lett. 579:3487–3492.

Disclaimers

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