

Product Information

Stromal Vascular Fraction (SVF) from human adipose tissues

Catalog Number	10HU-025 (Normal) 10HU-231 (Obesity) 10HU-233 (Type 2 Diabetes)	Cell Number	1.0 million cells/vial (Normal); 0.5 million cells/vial (Diseased)
Species	<i>Homo sapiens</i>	Storage Temperature	Liquid Nitrogen

Description

Human stromal vascular fraction (hSVF) is freshly isolated heterogeneous cell fraction derived from native adipose tissue or liposuction aspirates from normal donors, patients with Obesity (BMI>30) or Type 2 Diabetes. SVF is what remained in the pellet after removal of blood and fat components. It is crude and heterogeneous mix of multiple cell populations with different degree of maturity and function. Most sources indicate that adipose derived stem cells (ADSC) represent up to 10% (2~10%) of SVF. Endothelial cells (mature and progenitors) represents 7~30% of SVF. Fibroblasts could represent up to 50% of SVF. CD34+ cells are present at large number and could compose up to 63% of SVF.

iXCells Biotechnologies offers SVF from human subcutaneous white fat tissue. These cells are negative for HIV-1, HBV, HCV, mycoplasma, bacteria, yeast, and fungi.

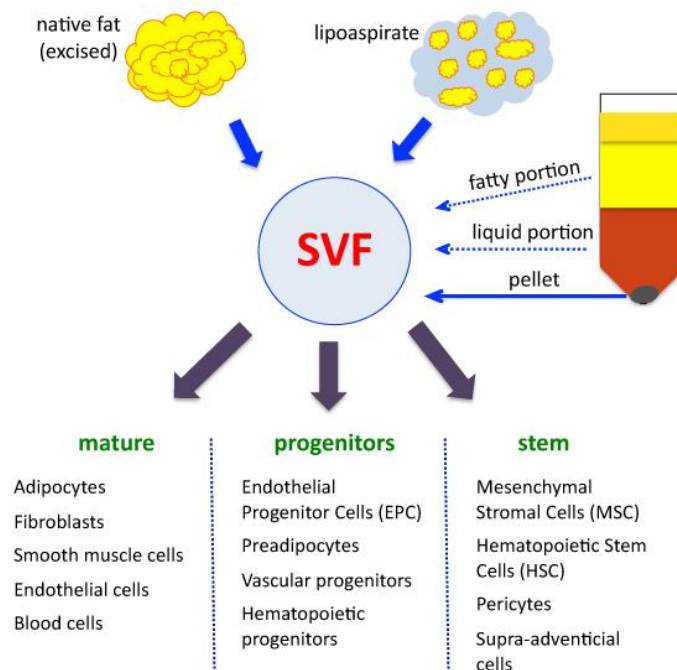


Figure 1. Derivation of SVF and its composition

Product Details

Tissue	SVF from human adipose tissues (Normal, Obesity, Type 2 Diabetes)
Package Size	1.0 million cells/vial (Normal); 0.5 million cells/vial (Diseased)
Passage Number	P0
Shipped	Cryopreserved
Storage	Liquid nitrogen
Growth Properties	Adherent
Media	Adipose-Derived Stem Cell Attachment Medium (Cat# MD-0002) Adipose-Derived Stem Cell Growth Medium (Cat # MD-0303)

Protocols

Standard Culture Procedure

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 minute. Keep the cap out of water to minimize the risk of contamination.
3. Pipette the cells into a 15ml conical tube with 5ml fresh Adipose-Derived Stem Cells Attachment Medium (Cat# MD-0002).
4. Centrifuge at 1000rpm (~220g) for 5 minutes under room temperature.
5. Remove the supernatant and re-suspend the cells in fresh Adipose-Derived Stem Cells Attachment Medium.
6. Apply the one vial cells in Adipose-Derived Stem Cells Attachment Medium to one well of 6 well plate or one 35 mm dish (0.5-1.0 x 10⁶ cells/well).

Note: 6 well plate or 35 mm dish should be coated with 0.1% gelatin to achieve maximum cell attachment.

7. Leave the cells undisturbed for 1~2 days. Most of cells would be floating. Remove them along the Adipose-derived Stem Cells Attachment Medium. Rinse cells once with PBS, and then add Adipose-derived Stem Cells Growth Medium (Cat # MD-0003) to the cells. Change medium every day for the first 2 days and then every other day until cell reach >85% confluence (it may take about 7-10 days).
8. Cells can be subcultured or frozen when reach they reach > 85% confluence.

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

References

[1] Bourin P, et al and Gimble JM. Stromal cells from the adipose tissue-derived stromal vascular fraction and culture expanded adipose tissue-derived stromal/stem cells: a joint statement of the International Federation for Adipose Therapeutics and Science (IFATS) and the International Society for Cellular Therapy (ISCT). *Cytherapy*, 2013; 15(6):641-648.

[2] Gimble JM, et al and Guilak F. Concise review: Adipose-derived stromal vascular fraction cells and stem cells: let's not get lost in translation. *Stem Cells*. 2011; 29(5):749-754.

Disclaimers

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