

## Product Information

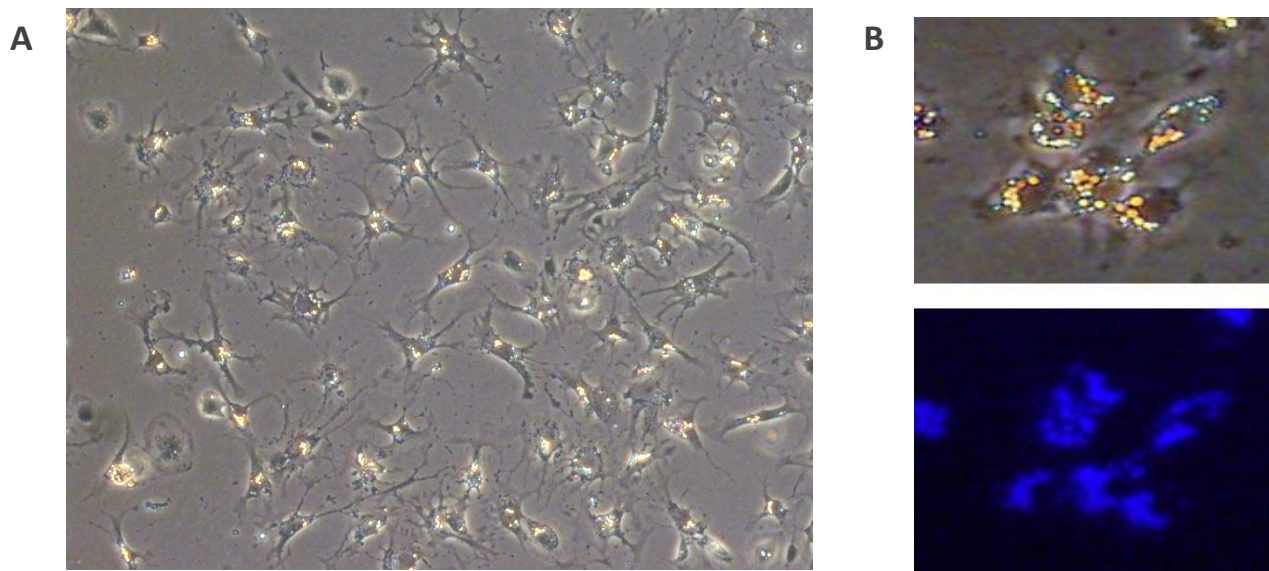
### Mouse Hepatic Stellate Cells (MHSC)

Catalog Number	10MU-021	Cell Number	0.5 million cells/vial
Species	<i>Mus Musculus</i>	Storage Temperature	Liquid nitrogen

### Description

Hepatic stellate cells (HSCs) are liver-specific mesenchymal cells, and account for 5~8% of the cells in the liver. HSCs play vital roles in the homeostasis of liver extracellular matrix, repair, regeneration and fibrosis, and control retinol metabolism, storage and release. The stellate cell is the major cell type involved in liver fibrosis in response to liver injury<sup>[1]</sup>. In healthy liver, HSCs are in a quiescent state, and contains numerous vitamin A lipid droplets, constituting the largest reservoir of vitamin A in the body. When the liver is damaged, HSCs can change into an activated state, which is characterized by proliferation, contractility and chemotaxis. The amount of vitamin A decreases progressively in injured liver. The activated HSCs also secrete collagen scar tissue, which can lead to cirrhosis. In chronic liver disease, prolonged and repeated activation of stellate cells causes liver fibrosis<sup>[2]</sup>.

Primary culture of HSC is a valuable tool to study liver fibrosis. iXCells Biotechnologies provides high quality frozen or freshly plated mouse HSCs (MHSC) isolated from mouse liver. The cells are frozen immediately after isolation, with >0.5 million cells per vial, or shipped one day after plating. There will be 30-50% dead cells after thawing, which is normal for MHSC.



**Figure 1. (A)** Phase contrast image of day 3 culture of mouse hepatic stellate cells (MHSC). **(B).** Vitamin A droplets in MHSC were visualized by blue autofluorescence (lower panel) when excited with UV light.

## Product Details

<b>Tissue</b>	Mouse liver
<b>Package Size</b>	0.5 million cells/vial (enough to seed on 3 wells of a 12-well plate). Available as plated sub-confluent culture in 12-well plate, 6-well plate, T25, and T75 format
<b>Passage Number</b>	P0
<b>Shipped</b>	Fresh or frozen
<b>Storage</b>	Liquid nitrogen
<b>Growth Properties</b>	Adherent
<b>Media</b>	Stellate Cell Growth Medium (Cat# MD-0014)

## Protocols

1. Add warm **Stellate Cell Growth Medium (Cat# MD-0014)** to culture dish, then thaw frozen cells quickly in water bath, add 1ml warm culture medium, mix cells gently by pipetting up and down 5 times (avoid vigorous pipetting), then add cells directly to culture dish containing the medium.
2. Recommended seeding density: 2~3 million is enough to plate for one 96 well plate, or one 6 well plate, or one 12 well plate.
3. To enhance cell attachment, change medium 24~30 hours after the initial plating. Pipet off the medium gently using pipetter to avoid cell detachment during medium change.
4. Prior to treatment, starve the cells overnight without growth supplement. Cells can be used for treatment 30 hours after the initial plating.

**Note:** We don't recommend to passage the MHSCs.

## References

- [1] Chunyue Yin, et al, J Clin Invest. 2013;123(5):1902–1910. Hepatic stellate cells in liver development, regeneration, and cancer.
- [2] Rockey D. C. . Semin Liver Dis 21(3):337-49. (2001) Hepatic blood flow regulation by stellate cells in normal and injured liver.

## Disclaimers

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