

Product Information

Human Intestinal Fibroblasts (HIF)

Catalog Number	10HU-136	Cell Number	0.5 million cells/vial
Species	<i>Homo sapiens</i>	Storage Temperature	Liquid Nitrogen

Description

Fibroblasts are mesenchymal cells derived from the embryonic mesoderm, which have been extensively used for a wide range of cellular and molecular studies. There is evidence showing that fibroblasts in various organs are intrinsically different [1]. Fibroblasts secrete a non-rigid extracellular matrix that is rich in type I and/or type III collagen [2]. They are responsible for much of the synthesis of extracellular matrix in connective tissues and play a central role in wound healing. Many diseases are associated with fibroblasts, either because fibroblasts are implicated in their etiology or because of the fibrosis that accompanies damage to other cell types in tissues. For example, the development of bowel stenosis in Crohn's disease patients is caused by extreme fibroblast proliferation and extracellular matrix expansion [3].

iXCells Biotechnologies provides high quality Human Intestinal Fibroblasts (HIF), which are isolated from human intestinal tissue and cryopreserved at P1, with >0.5 million cells in each vial. HIF express fibronectin and are characterized by their spindle-shaped morphology. They are negative for HIV-1, HBV, HCV, mycoplasma, bacteria, yeast, and fungi and can further expand for no more than 3 passages in **Fibroblast Growth Medium** (Cat# MD-0011) under the condition suggested by iXCells Biotechnologies.

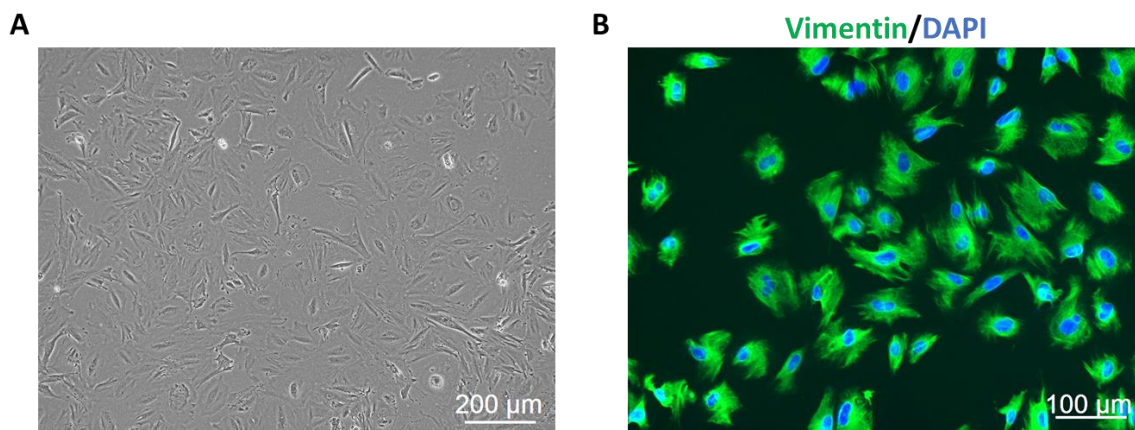


Figure 1. Human intestinal Fibroblasts (HIF). (A) Phase contrast image of HIF. (B) Immunofluorescence staining with antibody against Vimentin.

Product Details

Tissue	Human intestinal tissue
Package Size	0.5 million cells/vial
Passage Number	P1
Shipped	Cryopreserved
Storage	Liquid nitrogen
Growth Properties	Adherent
Media	Fibroblast Growth Medium (Cat# MD-0011)

Protocols

Thawing of Frozen Cells

1. Upon receipt of the frozen Human Intestinal Fibroblasts (HIF), 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 **Fibroblast Growth Medium** (Cat# MD-0011).
4. Centrifuge at 1,000 rpm (~220 g) for 5 minutes under room temperature.
5. Remove the supernatant and resuspend the cells in Fibroblast Growth Medium.
6. Culture the cell in a T75 flask. Change medium every other day till cells reach 80-90% confluence.

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

Standard Culture Procedure

1. HIFs can be cultured in **Fibroblast Growth Medium** (Cat# MD-0011).
2. When cells reach ~80-90% confluence, remove the medium, and wash once with sterile PBS (5 mL/T75 flask).
3. Add 3 mL of 0.25% Trypsin-EDTA to the flask and incubate for 3-5 minutes at 37°C. Neutralize the Trypsin by adding 2-3 volumes of cell culture medium.
4. Centrifuge 1,000 rpm (~220 g) for 5 minutes and resuspend the cells in desired volume of medium.
5. Seed the cells onto the new culture vessels at 5×10^3 cells/cm². Change the medium every other day until cells reach 80-90% confluence.

References

- [1] Conrad, G. W., Hart, G. W., Chen, Y. (1977) Differences in vitro between fibroblast-like cells from cornea, heart, and skin of embryonic chicks. *J. Cell Sci.* 26:119-137.
- [2] Gabbiani, G., Rungger-Brandle, E., The fibroblast. In *Tissue Repair and Regeneration* (L. E. Glynn, ed.), pp 1-50. *Handbook of Inflammation*, Vol. 3. Amsterdam, Elsevier, 1981.
- [3] Luna, J., Masamunt, MC., Rickmann, M., Mora, R., Espana, C., Delgado, S., Llach, J., Vaquero, E., Sans, M. (2011) Rocotrienols have potent antifibrogenic effects in human intestinal fibroblasts. *Inflamm Bowel Dis.* 17(3):732-41

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