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Product Information

LiverPool™ Cryopreserved Human Hepatocytes

Catalog Numbers

X008052 Mixed Gender Human
5-donor pooled
LiverPool Cryopreserved Hepatocytes

X008001 Mixed Gender Human
10-donor pooled
LiverPool Cryopreserved Hepatocytes

X008000 Mixed Gender Human
20-donor pooled
LiverPool Cryopreserved Hepatocytes

X008005 Mixed Gender Human
50-donor pooled
LiverPool Cryopreserved Hepatocytes

FX008001 Female Human
10-donor pooled
LiverPool Cryopreserved Hepatocytes

MX008001 Male Human
10-donor pooled
LiverPool Cryopreserved Hepatocytes

Storage Temperature ≤ –150 °C

TECHNICAL BULLETIN

Product Description

The patented LiverPool cryopreserved hepatocytes are blended to ensure sufficient activity levels in all CYP categories. A proprietary algorithm, drawing upon a cell database of known substrate performances, is used to select hepatocyte lots from a well-characterized cell bank to achieve targeted enzyme levels. This makes your research more focused and productive. With large lots sizes available and the ability to reproduce activity levels, research results are consistent and repeatable. LiverPool hepatocytes help you to benefit from clear data that helps speed discovery and pre-clinical research.

LiverPool hepatocytes offer:

- Characterization ─ All LiverPool products are fully characterized across numerous substrates to ensure consistency and reliability.
- Format Choice ─ Available in 5-, 10-, 20-, and 50-donor pool sizes
- Savings ─ LiverPool hepatocytes enable researchers to eliminate pooling procedures, characterization testing, and costly multi-donor work, saving both time and money.
- Large Lot Sizes ─ All contributory hepatocyte lots are sourced from whole, intact, transplant-quality livers, ensuring each donor lot can create large product sizes. This enables researchers to have great consistency across multiple experiments.
- Quality ─ All LiverPool lots meet stringent quality control specifications prior to release.

Components

This product is a cryovial containing a minimum of 5 million primary human hepatocytes.

Reagents and Equipment Required but Not Provided for Thawing.

Note: Neither media nor supplements are supplied with the vials. These must be obtained prior to receiving the vials.

- 70% alcohol (prepared from Catalog Number E7148, ethyl alcohol, or I9516, 2-propanol)
- Bio-Pure™ 70% alcohol wipes (Catalog Number Z688487)
- 0.4% Trypan blue solution (Catalog Number T8154)
- Hemocytometer (or equivalent cell staining and counting device)
- *InVitro*GRO™ HT Medium (Catalog Number Z99019)
- *InVitro*GRO KHB (Catalog Number Z99074)

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

Store the product at ≤ –150 °C. The hepatocytes are stable for 5 years at ≤ –150 °C.

Procedure

Thawing Procedure:

1. Pre-warm *InVitro*GRO HT Medium to 37 °C.
2. Transfer 48 mL of warm *InVitro*GRO HT Medium to a sterile 50 mL conical tube.
3. Carefully remove the vial of LiverPool cryopreserved hepatocytes from the shipping container or cryostorage unit. If the vial was stored in the liquid phase, carefully remove the cap and pour off any liquid nitrogen. Close the cap firmly before placing the vial into the water bath.
4. Immediately immerse the vial into a 37 °C water bath. Shake gently until the cells pull away from the vial wall. Inside a biological safety cabinet, transfer the contents of the vial into the conical tube containing the pre-warmed *InVitro*GRO HT Medium. This step can take 90–120 seconds.
5. Add 1.0 mL of the hepatocyte suspension to the vial to wash any remaining cells from the vial.
6. Resuspend the hepatocytes by gently inverting the tube several times (3 times is sufficient).
7. Centrifuge the cell suspension at 50 × *g* in a room temperature centrifuge for 5 minutes.
8. Discard the supernatant by either pouring in one motion or aspirating using a vacuum pump.
9. Loosen the cell pellet by gently swirling the centrifuge tube.
10. Add 2 mL of *InVitroGRO* KHB (or other appropriate) buffer. Gently swirl the centrifuge tube to resuspend the hepatocytes.
11. Determine the total cell count and the number of viable cells using the Trypan Blue exclusion method.
12. Dilute to desired concentration.

GMA,TL,VNC,MAM 10/17-1

Appendix

Trypan Blue Cell Count Worksheet

Remove an aliquot of the cell suspension and perform the following:

- Dilute cells for a Trypan Blue Exclusion cell count.
  Example of a 10× dilution:
  700 µL Medium or Buffer + 200 µL Trypan Blue + 100 µL diluted cells
- Mix and incubate for 1 minute
- Apply 10 µL aliquot to one side of hemacytometer
- Count cells under 10× magnification
- Calculate total viable cells and percent viability

Cell Count:	
Dilution Factor: _____×	Total Viable Cells:_____
Number of squares counted:_____	Total Nonviable Cells:_____
	Total Cell Count:_____
% Viability = Total Viable Cells/Total Cell Count × 100 = _____	

Dilution of Cell Suspension

$$\text{Cell Concentration (\#Viable cells/mL)} = \frac{\text{Total Viable cells}}{\text{\# squares counted}} \times 10{,}000 \times \text{Dilution Factor}\_\_\_\_\_ = \_\_\_\_\_ \text{ cells/mL}$$

Cell Concentration × _____ mL Original Suspension Volume = _____ Total Yield (cells)

$$\text{Total Resuspension Volume} = \frac{\text{Total Yield (cells)}}{\text{Target Cell Concentration (cells/mL)}} = \_\_\_\_\_ \text{ mL}$$

Resuspension Volume to be added = Total Resuspension Volume – Original Suspension Volume

=_____mL volume to be added