Applied StemCell, Inc.
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Datasheet

# SNL 76/7 Feeder Cells, P14, Mitomycin-C-treated

## Product Information

**Product Specifications**

| Catalog Number | Cells per Vial | Number of Vials |
|---|---|---|
| ASF-1327 | 5 x $10^6$ | 1 |
| ASF-1328 | 5 x $10^6$ | 5 |

**Description**

Mouse embryonic stem cells (ESCs) and induce pluripotent stem cells (iPSCs) generally require culture on feeder cells as well as medium containing Leukemia Inhibitory Factor (LIF) to maintain pluripotency and the capacity to self-renew. The SNL 76/7 cell line, derived from a mouse fibroblast STO cell line transformed with neomycin resistance and murine LIF genes, can be used as feeder cells for mouse and human ESC and iPSC culture. The SNL cells are sensitive to HAT selection (hypoxanthine, aminoprotein and thymidine) and negative for HPRT (hypoxanthine guanine phosphoribosyl transferase). The cells are derived from a representative cross section of the Carworth CF-1 colony from Charles River.

**Passage**

P14

**Treatment**

Mitomycin C

**Shipping**

Dry ice

**Storage and Stability**

Store in liquid nitrogen freezer immediately upon receipt.

**Biosafety Level**

BSL-1

**Safety Precaution**

**PLEASE READ BEFORE HANDLING ANY FROZEN VIALS**. Please wear the appropriate Personal Protection Equipment (lab coat, thermal gloves, safety goggles and a face shield) when handling the cells. Handle the frozen vials with due caution. Please be aware that the following scenario can occur: Liquid nitrogen can leak into the vials when the vials are submerged in liquid nitrogen. Upon thawing, the liquid nitrogen returns to the gas phase, resulting in a dangerous build-up of pressure within the vial. This can result in the vial exploding and expelling not only the vial contents but also the vial cap and plastic fragments of the vial.

**Restricted Use**

This product is for research use only and not intended for human or animal diagnostic or therapeutic uses.

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## Media and Material

### Medium (I)

| Component | Concentration | Vendor |
|---|---|---|
| ESC-Sure™ DMEM | | Applied StemCell, #ASM-5001 |
| ESC-Sure™ FBS | 10% | Applied StemCell, #ASM-5007 |
| Nonessential amino acids | 0.1 mM | Life Technologies, #11140-050 |
| Sodium Pyruvate | 1 mM | Life Technologies, #11360-070 |
| L-Glutamine | 2 mM | Life Technologies, #25030-164 |

### Suggested plating density (II)

| Dish Size | Surface Area* | Working volume | MEF per dish / well |
|---|---|---|---|
| 100 mm | 55 $cm^2$ | 11 - 16.5 ml | 1.7 - 2.8 x $10^6$ |
| 60 mm | 21 $cm^2$ | 4.2 - 6.3 ml | 0.65 – 1.1 x $10^6$ |
| 35 mm | 9 $cm^2$ | 1.8 - 2.7 ml | 0.27 – 0.45 x $10^6$ |
| T25 | 25 $cm^2$ | 5 – 7.5 ml | 0.75 - 1.25 x $10^6$ |
| T75 | 75 $cm^2$ | 15 – 22.5 ml | 2.25 - 3.75 x $10^6$ |
| T175 | 175 $cm^2$ | 35 – 52 ml | 5.25 - 8.75 x $10^6$ |
| 6-well | 9.5 $cm^2$ | 1.9 - 2.9 ml | 0.29 – 0.48 x $10^6$ |
| 12-well | 3.8 $cm^2$ | 0.8 - 1.2 ml | 0.11 – 0.19 x $10^6$ |
| 24-well | 1.9 $cm^2$ | 0.4 - 0.6 ml | 57,000 – 95,000 |
| 48-well | 0.95 $cm^2$ | 0.2 - 0.3 ml | 22,500 – 47,500 |
| 96-well | 0.32 $cm^2$ | 100 - 200 µl | 9,600 – 16,000 |

*Approximate growth surface areas. Numbers can vary between plastic ware from different suppliers

## Protocol

1. Remove a vial of frozen cells from liquid nitrogen and place it onto dry ice for 5' before thawing it at 37 ºC water bath. As soon as the majority of the content of the vial thawed, transfer it to a conical tube containing 10x volume of pre-warmed medium.
2. Spin at 1000 rpm for 5 min, discard medium, resuspend the cells in growth medium and plate them at an appropriate density in a gelatin-coated tissue-culture dish (generally 25,000-50,000 cells/$cm^2$, Appendix III). Optimal density is to be determined by the user for specific applications.