# Expi293F™ Cells

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Print Options

**Package Contents**

| Catalog Number | | Size |
|---|---|---|
| A14527 | Buy Now | 1 vial |
| A14528 | Buy Now | 6 × 1 vial |

- Concentration 1 × $10^7$ cells/vial

**Storage Conditions**

- Store in liquid nitrogen

**Required Materials**

- 125-mL polycarbonate, disposable, sterile, vent-cap Erlenmeyer shaker flask or other appropriate vessel for culturing suspension cells
- Orbital shaker in temperature and $CO_2$ controlled incubator
- Reagents and equipment to determine cell viability (e.g., hemocytometer with trypan blue or cell counter)
- Expi293™ Expression Medium

**Timing**

Thawing and Recovery: 3–4 days
Subculturing: Every 3–4 days

**Selection Guide**

Protein Expression Systems
Go online to view related products.

**Product Description**

- The Expi293F™ cell line is a variant of the 293 cell line, which is adapted to high-density suspension growth in Expi293™ Expression Medium.

**Important Guidelines**

- Subculture the Expi293F™ Cells a minimum of three times to allow them to recover from thawing before using them in transfection experiments.
- Keep cell densities between 3–5 × $10^6$ cells/mL of culture for best performance.
- We recommend maintaining cells in a 125-mL or 250-mL polycarbonate, disposable, sterile Erlenmeyer flask containing 25–40 mL or 50–80 mL total working volume of cell suspension, respectively.
- Glass flasks may be used, but clean them thoroughly after each use to avoid potential toxicity.

**Online Resources**

Visit our product page for additional information and protocols. For support, visit www.lifetechnologies.com/support.

For Research Use Only. Not for use in diagnostic procedures.

## Protocol Outline

A. Thaw cells.
B. Passage cells every 3–4 days.

## Expi293F™ Cell Culturing Protocol

See page 3 to view a typical procedure for thawing and passaging Expi293F™ Cells.

## Expi293F™ Cells Characteristics

**Growth properties:** Suspension

**Doubling time:** 24 hours. Doubling times may vary based on cell health, handling, and passage number.

**Viability:** >95% immediately after thawing. Monitor cell growth and viability the first 3–4 days to ensure the cells are not compromised. At 24 hours post-thaw, viability may drop to 80%, but should never get below 70%. By 3–4 days post-thaw, viability should be 90–95%.

**Subculture conditions**: Grow cells to 3–5 × $10^6$ cells/mL; then, split cells 1:10 to 0.3–0.5 × $10^6$ cells/mL every 3–4 days. Do not grow above 5 × $10^6$ cells/mL for best performance. Discard cells after passage number 40.

## Scaling Up Expi293F™ Cell Culture

You can scale up the Expi293F™ cultures in spinner flasks or bioreactors. Determine the optimal spinner or impeller speed and seeding density for your culture system. We recommend that the cells be seeded at 0.3 × $10^6$ to 0.5 × $10^6$ viable cells/mL. Optimum spinner speed is approximately 100–130 rpm, and optimum impeller speed in Celligen® stirred tank bioreactors is 70–100 rpm.

If the split ratio of cells to fresh media is less than 1:2, centrifuge the cell suspension and re-suspend the cell pellet in fresh medium before inoculating the culture.

## Cryopreserving Expi293F™ Cells

## Limited Product Warranty and Disclaimer Details

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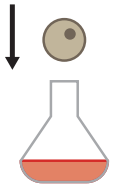
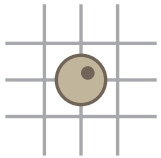
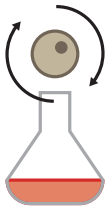
# Thawing and Passaging Expi293F™ Cells

Follow the procedure below to recover and subculture Expi293F™ Cells.

| Timeline | | Steps | Procedure Details | | |
|---|---|---|---|---|---|
| Day 1 | 1  | **Thaw cells** | Rapidly thaw the cells in a water bath, decontaminate the vial using 70% ethanol, and open the cryovial in a class II biological cabinet. | | |
| | 2  | **Add cells to medium** | Add cells to 29 mL of pre-warmed medium in 125-mL shake flask. | | |
| | 3  | **Count cells and determine viability** | Immediately post-thaw, count cells and determine viability. Use hemocytometer and trypan blue exclusion method or automated cell counter. Cell density should be approximately 0.3 × $10^6$ cells/mL and cell viability >90%. | | |
| | 4  | **Incubate** | **Temperature**<br>37°C | **Humidified Atmosphere**<br>8% $CO_2$ in air | **Orbital Shaker Platform**<br>125 rpm |
| Days 2–4 | 5  | **Subculture cells** | **First passage:** When cell density reaches >1 × $10^6$ cells/mL at ≥ 90% viability (typically 2–4 days post-thaw), split cells to 0.3–0.5 × $10^6$ cells/mL in Expi293™ medium.<br>**Subsequent passages:** Every 3–4 days, cells should reach 3–5 × $10^6$. Split to 0.3–0.5 × $10^6$ cells/mL. Do not grow above 5 × $10^6$ cells/mL.<br>We recommend using a 125- or 250-mL flask containing 25–80 mL of medium, respectively. | | |