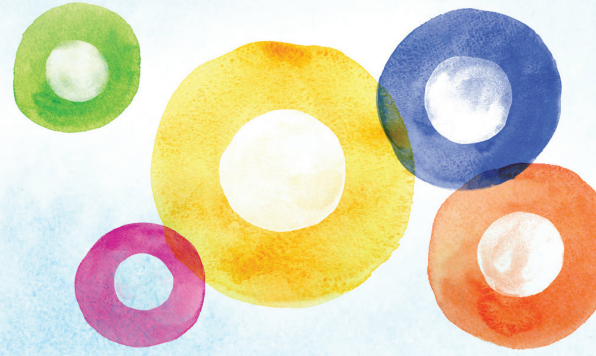


# Upgrade your cell culture today



## Culture cells with Advanced media

### Consistent cell growth, less serum, lower cost

Enriched with normal-serum constituents, Gibco™ Advanced™ media can be used in combination with your fetal bovine serum (FBS), and feature:

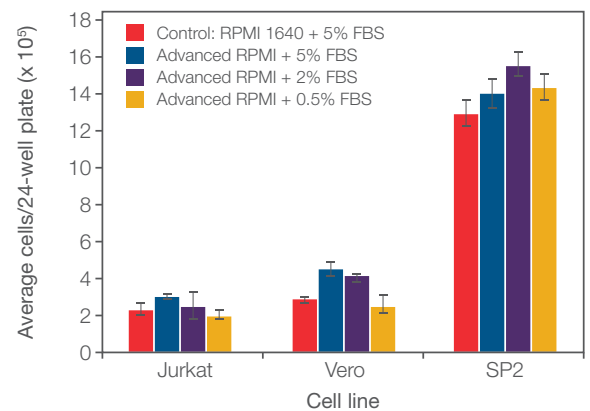
- Formulations that support common cell lines (e.g., Advanced DMEM, DMEM/F-12, MEM, RPMI 1640)
- Fewer lot-to-lot changes of serum, which means less variability
- Reduced cost due to lower serum usage and fewer lots tested
- Equivalent cell growth/no change in morphology of common cell lines (Figure 1)

## Culture cells with GlutaMAX media

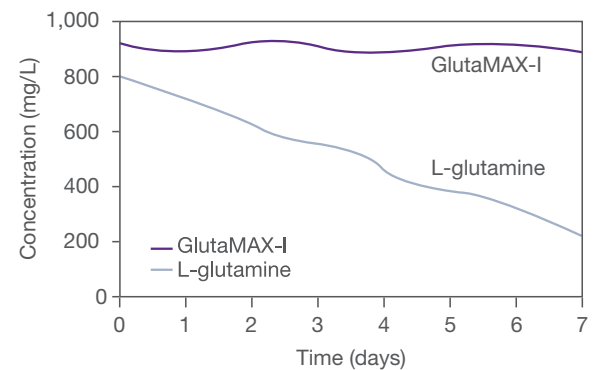
### More stable than L-glutamine—keeping your cells healthier for longer

L-glutamine can degrade in culture media to form toxic ammonia, which decreases cell viability. Gibco™ GlutaMAX™ Supplement, on the other hand, is a stabilized form of L-glutamine, and features:

- Superior stability—helps prevent degradation during storage or in the presence of cells, which happens with L-glutamine (Figure 2)
- Flexibility—available as a stand-alone supplement or as a component in Gibco™ basal media products



**Figure 1. Growth of cell lines in Advanced media.**



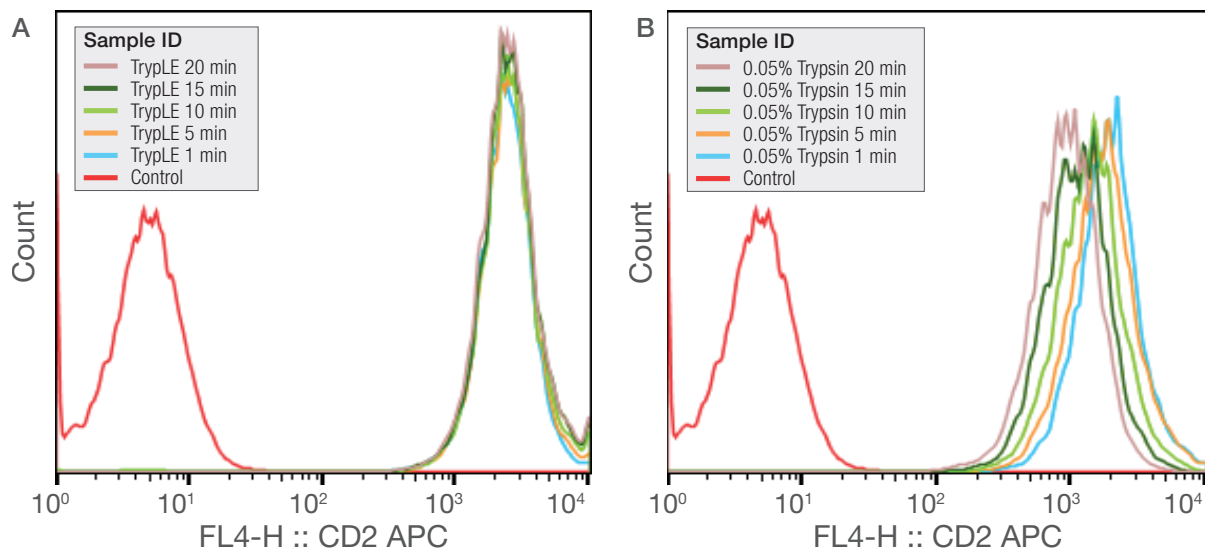
**Figure 2. Stability of Gibco™ CTS™ GlutaMAX™-I Supplement vs. L-glutamine in DMEM.** DMEM was supplemented with GlutaMAX-I or L-glutamine, aliquotted into vials, and stored at 37°C. Samples were taken daily and frozen at -20°C. Levels of GlutaMAX-I supplement and L-glutamine were determined by high-performance liquid chromatography (HPLC).

# Detach cells with TrypLE Express

## Cell detachment that is gentle on cell surface proteins

Gibco™ TrypLE™ reagents are highly purified, recombinant cell-dissociation enzymes that replace porcine trypsin. These reagents are ideal for dissociating attachment-dependent cell lines in both serum-containing and serum-free conditions. They can directly substitute for trypsin without protocol changes, and are:

- Stable at room temperature—no need to thaw
- Gentle on cells—help protect your cells' surface proteins (Figure 3)
- Animal origin-free—important if you need a product without animal-derived components



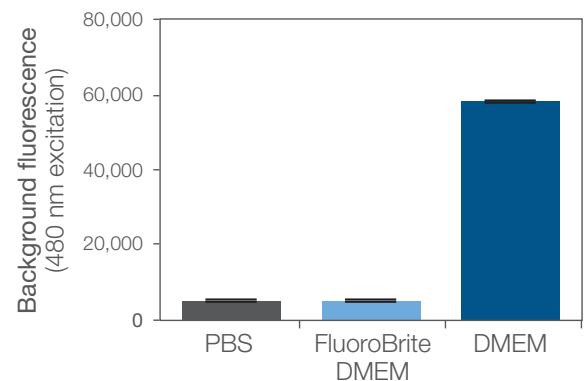
**Figure 3. Comparison of cell dissociation reagents.** Jurkat cells were used to demonstrate the effects of cell dissociation reagents on detection of the cell surface epitope CD2. **(A)** Time course of treatment with Gibco™ TrypLE™ Express Enzyme (1X). There is no reduction in the CD2 fluorescence signal. **(B)** Time course of treatment with 0.05% trypsin-EDTA. There is a time-dependent reduction in CD2 detection.

# Image cells with FluoroBrite DMEM

## Reduces background fluorescence in cell imaging while preserving cell viability

Gibco™ FluoroBrite™ DMEM is a culture medium designed for imaging cells, and features:

- Background autofluorescence 90% lower than the phenol red-free DMEM equivalent (Figure 4)
- Improved signal-to-noise ratio compared to the phenol red-free DMEM equivalent

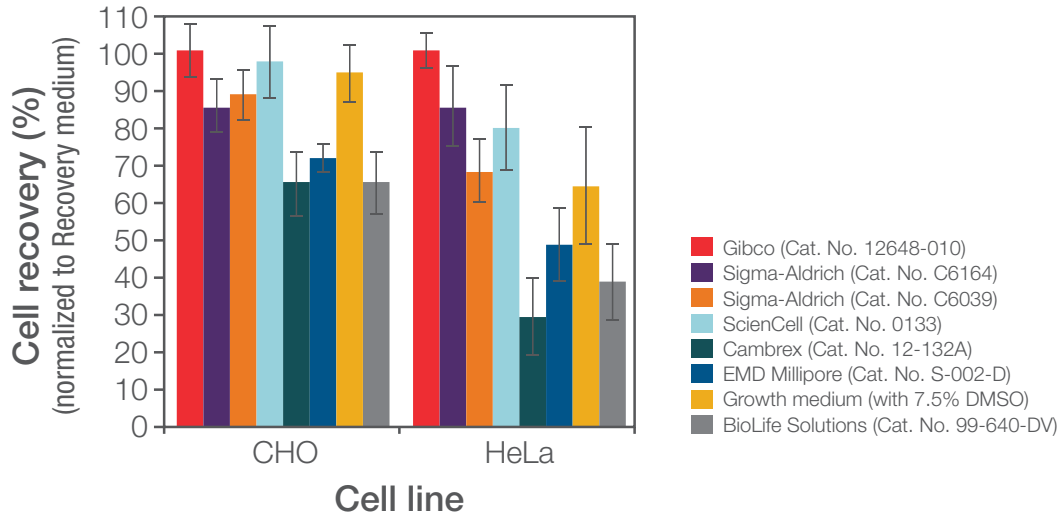


**Figure 4. Fluorescence of PBS, FluoroBrite DMEM, and phenol red-free DMEM at 509 nm (excitation at 480 nm).**

## Freeze cells with Recovery Freezing Medium

### A complete, ready-to-use freezing medium for a wide variety of commonly used mammalian cell lines

- No need to combine multiple products each time to make a home-brew freezing solution
- Improved viability of cells after thawing from cryostorage (Figure 5)



**Figure 5. Comparison of Gibco™ Recovery™ Cell Culture Freezing Medium vs. other cryopreservation technologies.**

For each cell line, the same number of cells were frozen in liquid nitrogen. Upon thawing, each cell sample was diluted into the same volume of a growth medium and seeded in 12-well plates (recovery was tested in eight different growth media). When the leading condition for a particular cell line had reached late log growth and none of the other conditions from that cell line had passed peak density, cells growing in all conditions for that cell line were harvested and the data analyzed. These cell lines were analyzed on day 6. Results were normalized to Gibco Recovery Cell Culture Freezing Medium and plotted with standard error bars (n = 4).

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