

# MegaCell™ Media

## The Next Generation of Classic Cell Culture Media

**We took the media you've always depended upon and turned them into the cutting-edge media you've always wanted.**

Let's face it – your classic media take some work! Eliminate the continuous tweaking and adjusting of your formulations with Sigma-Aldrich's new MegaCell media.

We optimized classic media through fortification of a multitude of specially engineered supplements, growth factors and amino acids. The results? The media you have always wanted: greater growth and performance while saving time and money.



- **MegaCell DME**  
(Dulbecco's Modified Eagle's Medium)
- **MegaCell MEM**  
(Minimum Essential Medium Eagle)
- **MegaCell MEM/F-12 Ham**  
(Minimum Essential Medium / Nutrient Mixture F-12 Ham)
- **MegaCell RPMI-1640**
- **MegaCell DME/F-12 Ham**  
(Dulbecco's Modified Eagle's Medium / Nutrient Mixture F-12 Ham)

### With MegaCell You Can Save Time and Money and Gain More Control Over Your Cultures

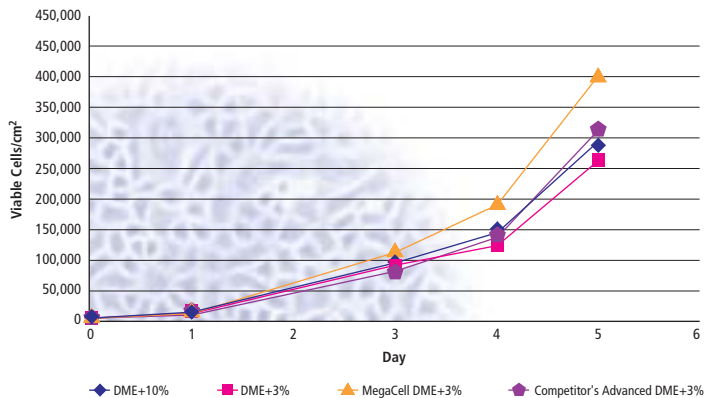
- Significantly reduces cost by reducing the amount of Fetal Bovine Serum (FBS) required for optimal growth.
  - **10% → 3% = more control**
- No adaptation time from:
  - Static to spinner flasks
  - Classic media + 10% FBS to MegaCell + 3% FBS.
- Outperforms standard media + 10% FBS.
- More product choices cover a wide variety of cellular applications.
- All formulations contain HEPES. Save time with advanced buffer capacity.
- Works well for attached and suspension cultures.
- Works well with calf serum and bovine serum.

**MegaCell Formulation:** The MegaCell line of products is based on the classic basal medium formulations, which may be found in the Sigma Life Science Research catalog. MegaCell has been enriched with growth factors, amino acids, insulin, trace elements and non-essential amino acids.

In addition, HEPES has been added to every bottle to increase buffering capacity. Serum supplementation was optimized at 3% for a broad range of cellular applications. However, MegaCell supplemented with 1-5% FBS performed very well.

## M 3942 MegaCell DME

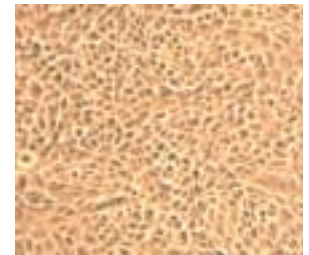
### MDBK Cells - Viable Cell Growth



### MDBK Cells MegaCell DME +3% FBS Day 3



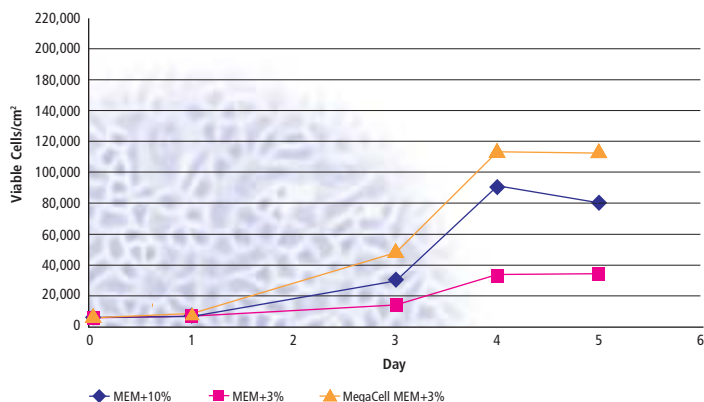
### MDBK Cells DME +10% FBS Day 3



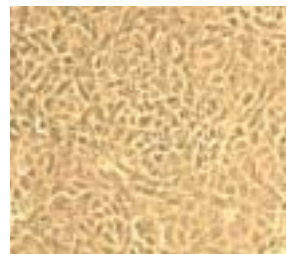
MegaCell DME supplemented with 4 mM L-glutamine and 3% FBS (Fetal Bovine Serum) was compared to DME supplemented with 4 mM L-glutamine and 10% FBS. MDBK (Bovine Kidney) cells were plated without pre-adaptation to MegaCell DME at 5000 viable cells/cm<sup>2</sup>. The flasks were incubated at 37 °C with 5% CO<sub>2</sub> and 95% air over a 4-day passage cycle. Cell growth and morphology were superior with MegaCell.

## M 4067 MegaCell MEM

### VERO Cells - Viable Cell Growth



### Vero Cells MegaCell MEM +3% FBS Day 4



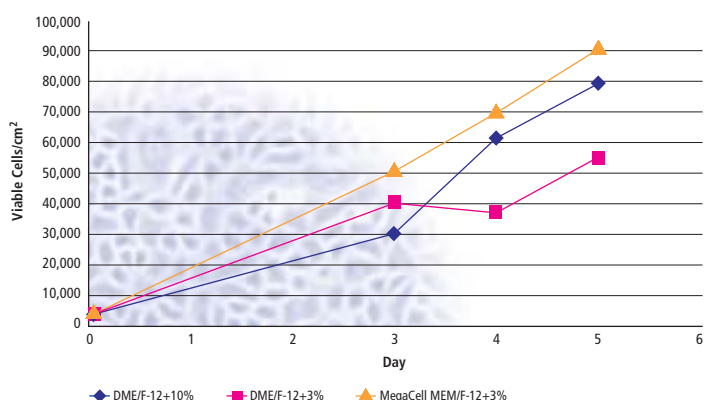
### Vero Cells MEM +10% FBS Day 4



MegaCell MEM supplemented with 4 mM L-glutamine and 3% FBS (Fetal Bovine Serum) was compared to MEM supplemented with 4 mM L-glutamine and 10% FBS. Vero (Monkey African Green Kidney) cells were plated, without pre-adaptation to MegaCell MEM at 5000 viable cells/cm<sup>2</sup>. The flasks were incubated at 37 °C with 5% CO<sub>2</sub> and 95% air over a 4-day passage cycle. Cell growth and morphology were superior with MegaCell.

## M 4317 MegaCell MEM/F-12 HAM

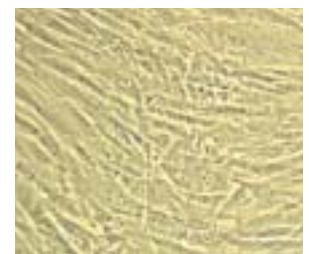
### MRC-5 Cells - Viable Cell Growth



### WI-38 Cells MegaCell MEM/F-12 +3% FBS Day 4



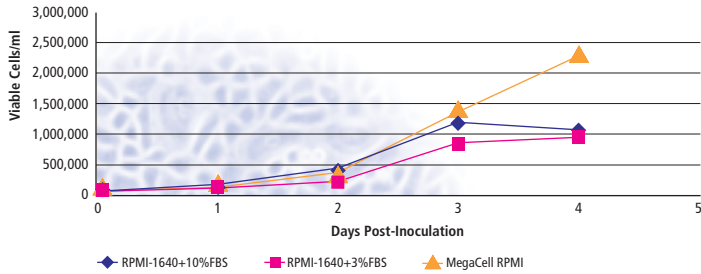
### WI-38 Cells DME/F-12 +10% FBS Day 4



MegaCell MEM/F-12 supplemented with 4 mM L-glutamine and 3% FBS (Fetal Bovine Serum) was compared to DME/F-12 supplemented with 4 mM L-glutamine and 10% FBS. WI-38 (Human Caucasian Fetal Lung) cells were plated, without pre-adaptation to MegaCell MEM/F-12 at 5000 viable cells/cm<sup>2</sup>. The flasks were incubated at 37 °C with 5% CO<sub>2</sub> and 95% air over a 4-day passage cycle. Cell growth and morphology were superior with MegaCell.

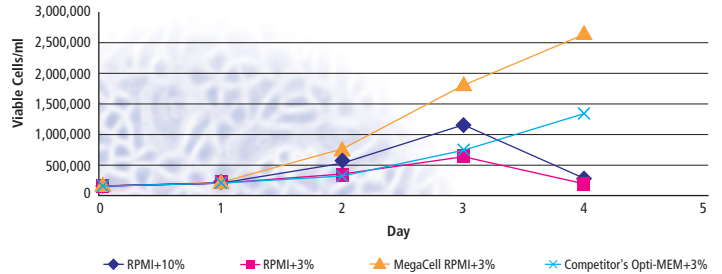
## M 3817 MegaCell RPMI-1640

### Hybridoma (HFN Cells) - Viable Cell Growth



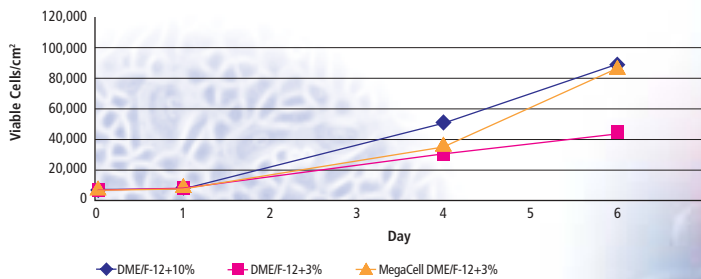
## M 3817 MegaCell RPMI-1640 vs. Opti-MEM®

### Hybridoma (HFN Cells) - Viable Cell Growth



## M 4192 MegaCell DME/F-12 HAM

### WI-38 Cells - Viable Cell Growth

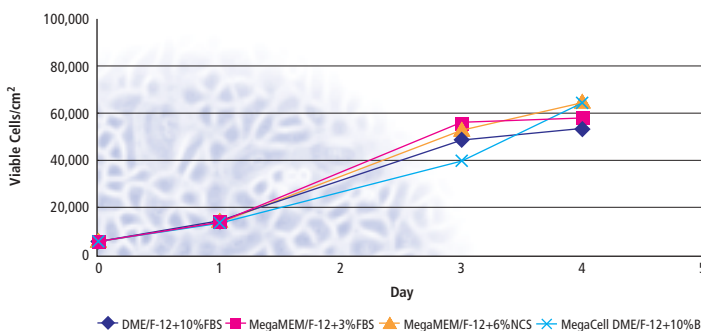


## MegaCell = Mega Options

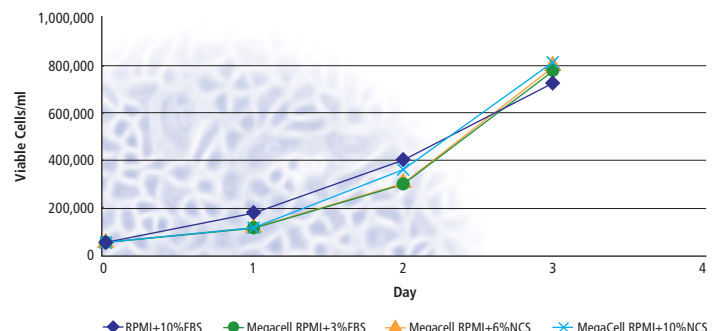
MegaCell gives you more options for serum supplementation. Without comprising cell growth or promotion, MegaCell

supplemented with 6% Newborn Calf Serum or 10% Bovine Serum worked as well as the classic medium + 10% FBS.

### MegaCell MEM/F-12 + Newborn Calf Serum MegaCell MEM/F-12 + Bovine Serum



### MegaCell RPMI + Newborn Calf Serum



## Common Applications for MegaCell + 3% Fetal Bovine Serum

*MegaCell shows outstanding results on a wide variety of cell lines, including attached and suspension cells.*

	Cell Line	Seeding Density	DME M 3942	DME/F12 M 4192	MEM M 4067	MEM/F12 M 4317	RPMI M 3817
Attached	<b>VERO</b>	5000/cm <sup>2</sup>	-	+	+++	++	-
Attached	<b>MDBK</b>	5000/cm <sup>2</sup>	++++	+	+	+++	-
Attached	<b>MRC-5</b>	5000/cm <sup>2</sup>	++	+++	++	+++	-
Attached	<b>WI-38</b>	5000/cm <sup>2</sup>	+++	+++	+	+++	-
Suspension	<b>SP20</b>	75000/ml	-	-	-	-	++++
Suspension	<b>HFN</b>	75000/ml	-	-	-	-	++++

**Note:** Number of "+" indicates strength of application data results.

**Note:** MegaCell is not recommended for 3T3 or MDCK cells.

## Related Products

Product	Description	Package Size
<b>SERA</b>		
<b>F 0926</b>	Fetal Bovine Serum, USDA-tested	100 ml 500 ml
<b>F 6178</b>	Fetal Bovine Serum, US Origin	100 ml 500 ml
<b>B 9433</b>	Bovine Serum, US Origin	100 ml 500 ml
<b>N 4637</b>	Newborn Calf Serum, US Origin	100 ml 500 ml
<b>ANTIBIOTICS</b>		
<b>A 5955</b>	Antibiotic Antimycotic Solution, stabilized (100X)	20 ml 100 ml
<b>G 1272</b>	Gentamicin Solution	10 ml
<b>P 4333</b>	Penicillin-Streptomycin Solution, stabilized (100X)	20 ml 100 ml
<b>MEDIA SUPPLEMENTS &amp; REAGENTS</b>		
<b>T 3924</b>	Trypsin-EDTA Solution	100 ml 500 ml
<b>G 7513</b>	L-Glutamine Solution	20 ml 100 ml

## Ordering Information

Product	Description	Package Size
<b>M 3942</b>	MegaCell DME	500 ml
<b>M 4067</b>	MegaCell MEM	500 ml
<b>M 4317</b>	MegaCell MEM/F-12 Ham	500 ml
<b>M 3817</b>	MegaCell RPMI-1640	500 ml
<b>M 4192</b>	MegaCell DME/F-12 Ham	500 ml

To place your order today call **800.325.3010**  
or visit our Web site at **sigma-aldrich.com**.