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Live-cell imaging and culture—visualize even the weakest fluorophores

A key challenge with live-cell fluorescence microscopy is to be able to image weak fluorophores without causing cell damage, photobleaching, or undesirable changes to cell health. We have addressed this problem by creating FluoroBrite™ DMEM, a DMEM-based formulation.

FluoroBrite™ DMEM is designed to enhance the signal-to-noise ratio of fluorophores so that researchers can visualize even the weakest fluorescent events in an environment that is amenable to cell health.

- **High quality**—background fluorescence that is comparable to PBS
- **Reduced background fluorescence**—90% lower than that of standard phenol red–free DMEM (Figure 1)
- **Cell health preservation**—provides the required nutrients for routine cell culture when supplemented with 10% fetal bovine serum and 4 mM L-glutamine or GlutaMAX (Figure 2)

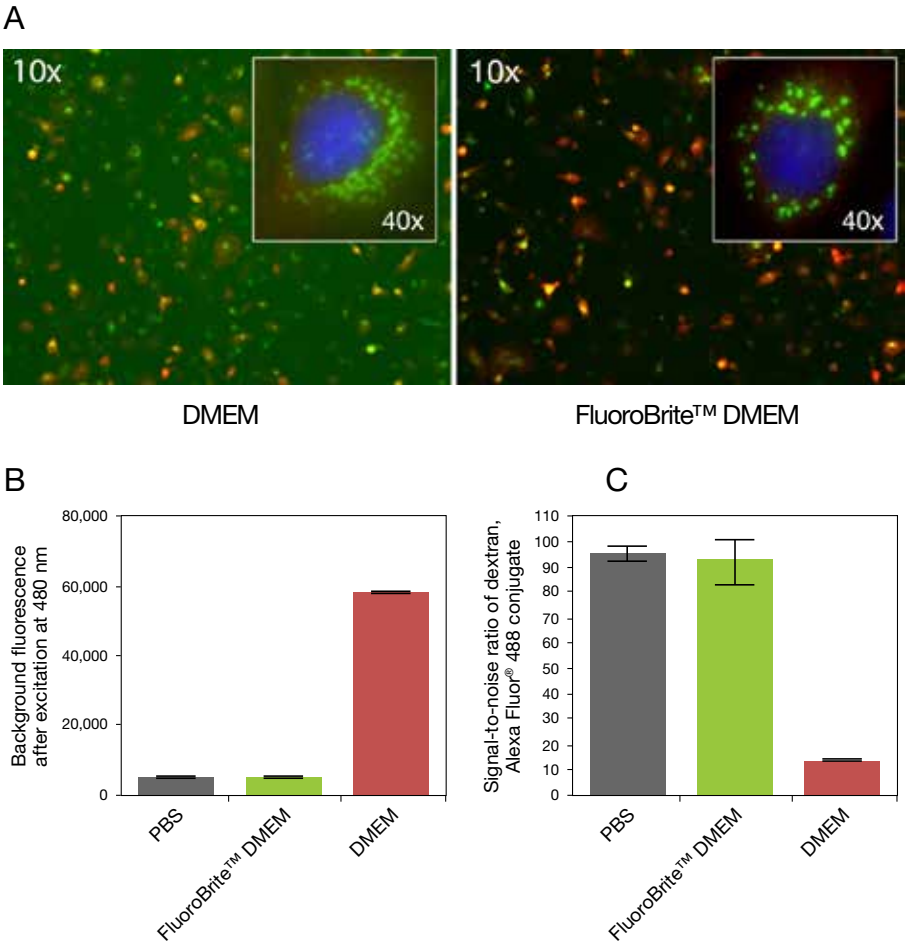

Figure 1. FluoroBrite™ DMEM has 10% of the background fluorescence emitted by standard phenol red–free DMEM and provides a 9-fold enhancement in signal-to-noise ratio. (A) Images of live epithelial cells that have been labeled with CellLight® Golgi-GFP, BacMam 2.0 (Cat. No. C10592) and cultured in phenol red–free DMEM (Cat. No. 31053) or FluoroBrite™ DMEM with 10% fetal bovine serum. Cells in the 10x images are co-labeled with CellLight® Actin-RFP, BacMam 2.0 (Cat. No. C10583). Cells in the 40x images (insets) are co-labeled with ER-Tracker™ Red (BODIPY® TR Glibenclamide; Cat. No. E34250). **(B)** Fluorescence of PBS, FluoroBrite™ DMEM, and phenol red–free DMEM at 509 nm in response to excitation at 480 nm. **(C)** Fluorescent signal of dextran labeled with Alexa Fluor® 488 (Cat No. D22910) over background in PBS, FluoroBrite™ DMEM, and phenol red–free DMEM.

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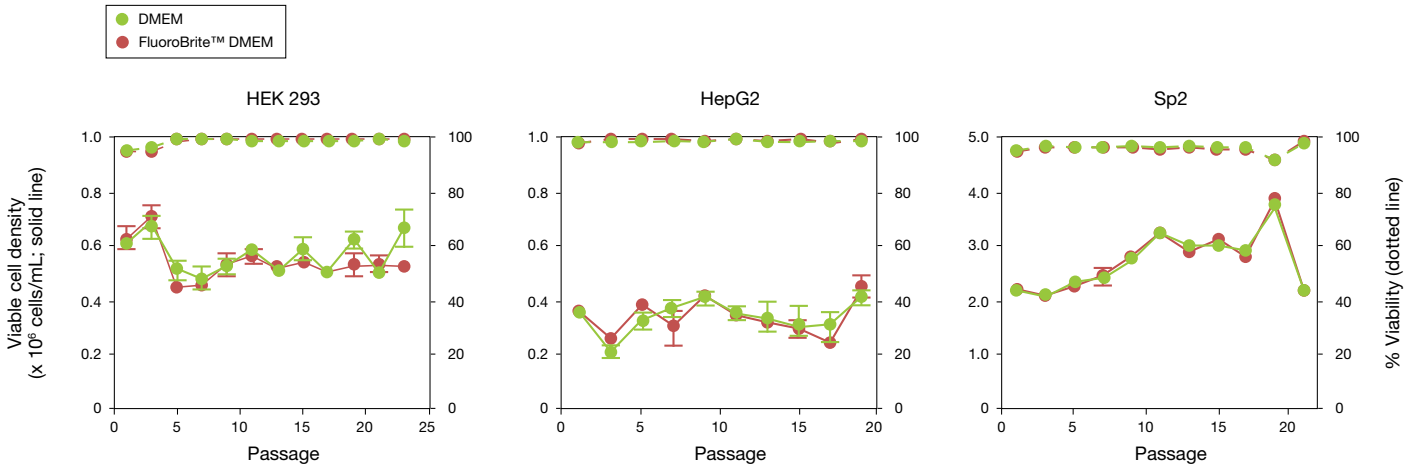

Figure 2. Cell lines cultured in FluoroBrite™ DMEM and standard DMEM display comparable long-term growth over multiple passages. Graphs display the average viable cell density (solid line; left y-axis) and average percent viability (dotted line; right y-axis) for three cell lines cultured for up to 23 passages in a standard phenol red–free DMEM (Cat. No. 31053) or FluoroBrite™ DMEM, both supplemented with 10% fetal bovine serum and 4 mM GlutaMAX. Note: The Sp2 suspension cell line was tested for long-term growth in FluoroBrite™ DMEM because of its known hypersensitivity to nutrient deficiencies.

Ordering information

Product	Quantity	Cat. No.
FluoroBrite™ DMEM	500 mL	A18967-01
FluoroBrite™ DMEM	10 x 500 mL	A18967-02

Find out more at **lifetechnologies.com**

In the United States:
For customer service, call 1-800-766-7000
To fax an order, use 1-800-926-1166
To order online: www.fishersci.com

In Canada:
For customer service, call 1-800-234-7437
To fax an order, use 1-800-463-2996
To order online: www.fishersci.ca

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