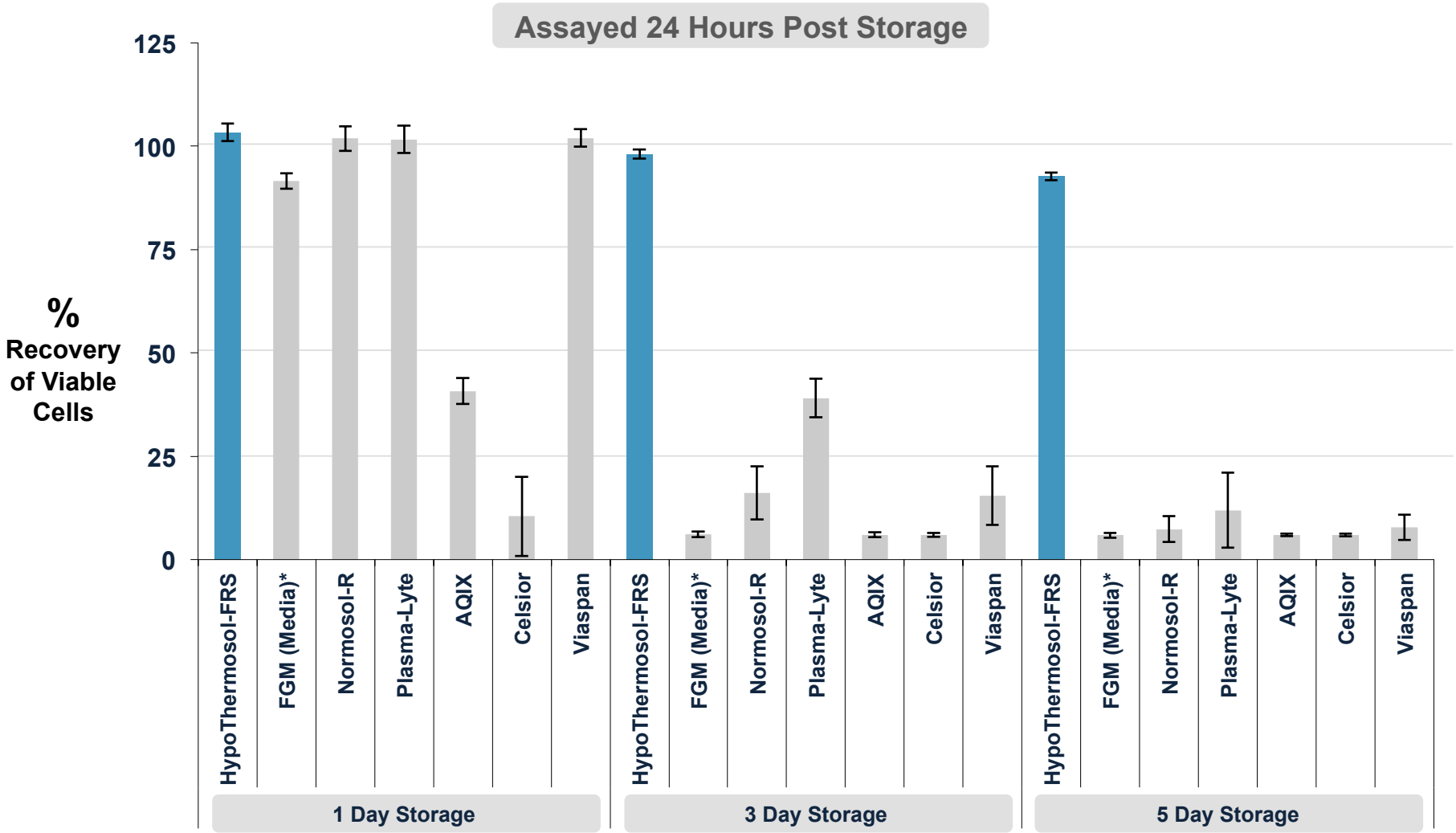
HypoThermosol® Performance Evidence

BioLife Solutions®

5-Day Hypothermic Storage of Human Dermal Fibroblasts Enabled by HypoThermosol®

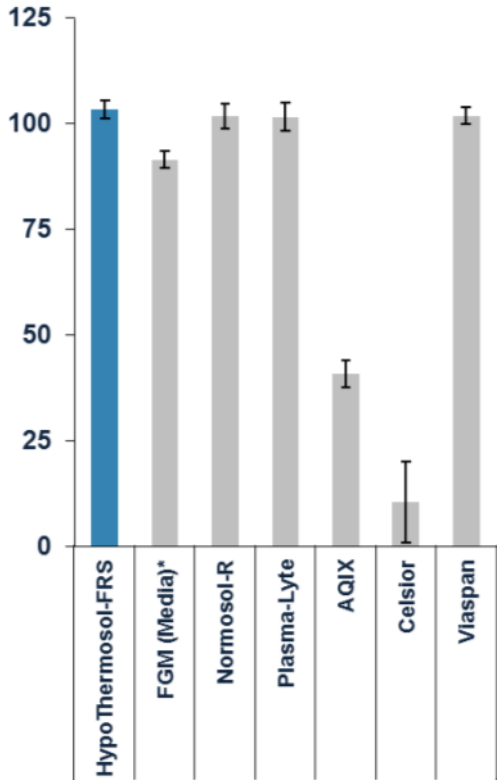


* Contains serum alamarBlue® stain for metabolic activity

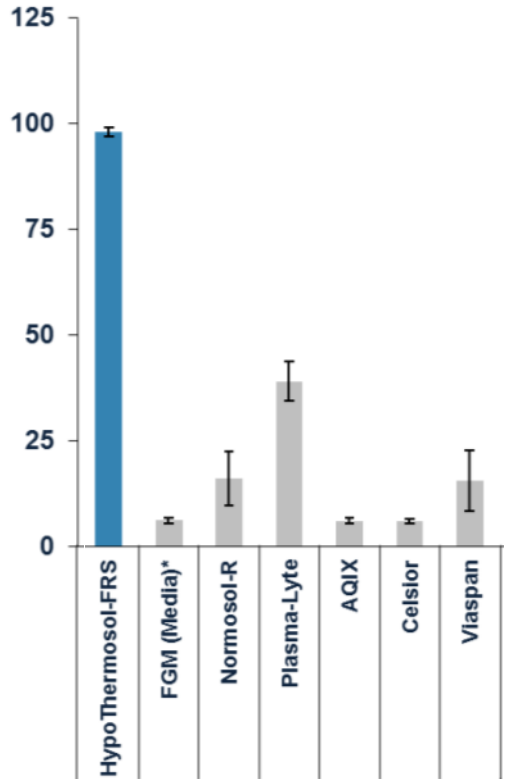
BioLife Solutions®

5-Day Hypothermic Storage of Human Dermal Fibroblasts Enabled by HypoThermosol®

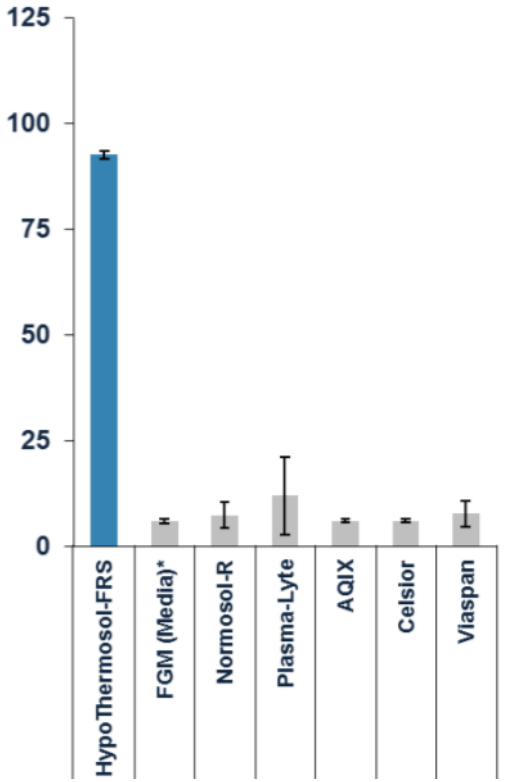
Assayed 24 Hours Post Storage - % Recovery of Viable Cells



1 DAY STORAGE



3 DAY STORAGE

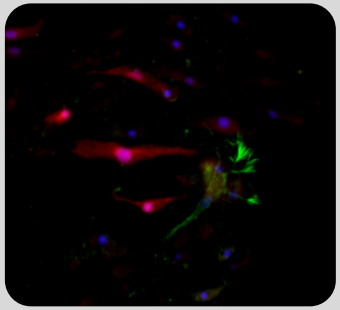
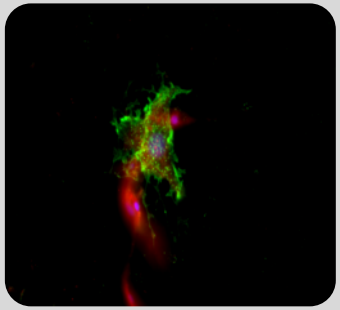
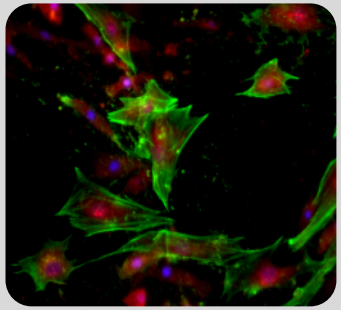
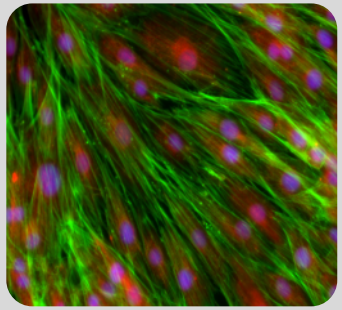
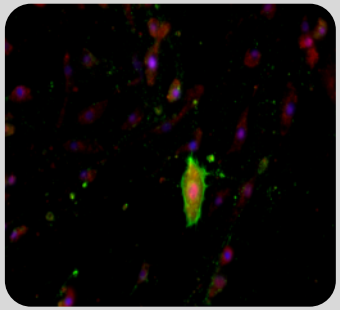
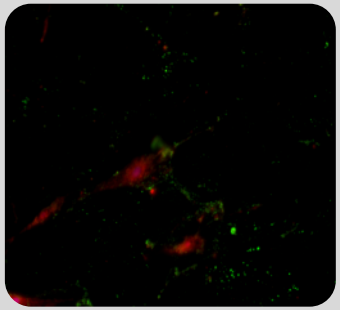
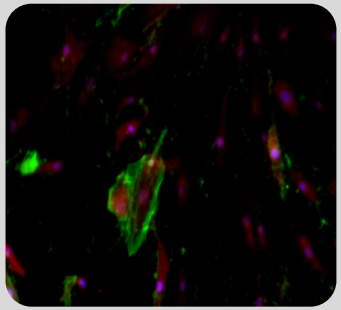
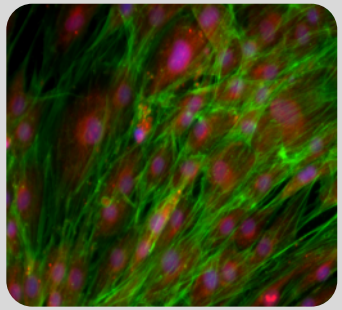


5 DAY STORAGE

* Contains serum alamarBlue® stain for metabolic activity

BioLife Solutions®

Representative Fluorescent Micrographs Illustrating Morphology of Normal Human Dermal Fibroblasts Stored in HypoThermosol®

Media with Serum	Celsior®	Viaspan®	HypoThermosol®
			
3 Day Storage	3 Day Storage	3 Day Storage	3 Day Storage
			
5 Day Storage	5 Day Storage	5 Day Storage	5 Day Storage

Green
Actin Cytoskeleton
Phalloidin (FITC)

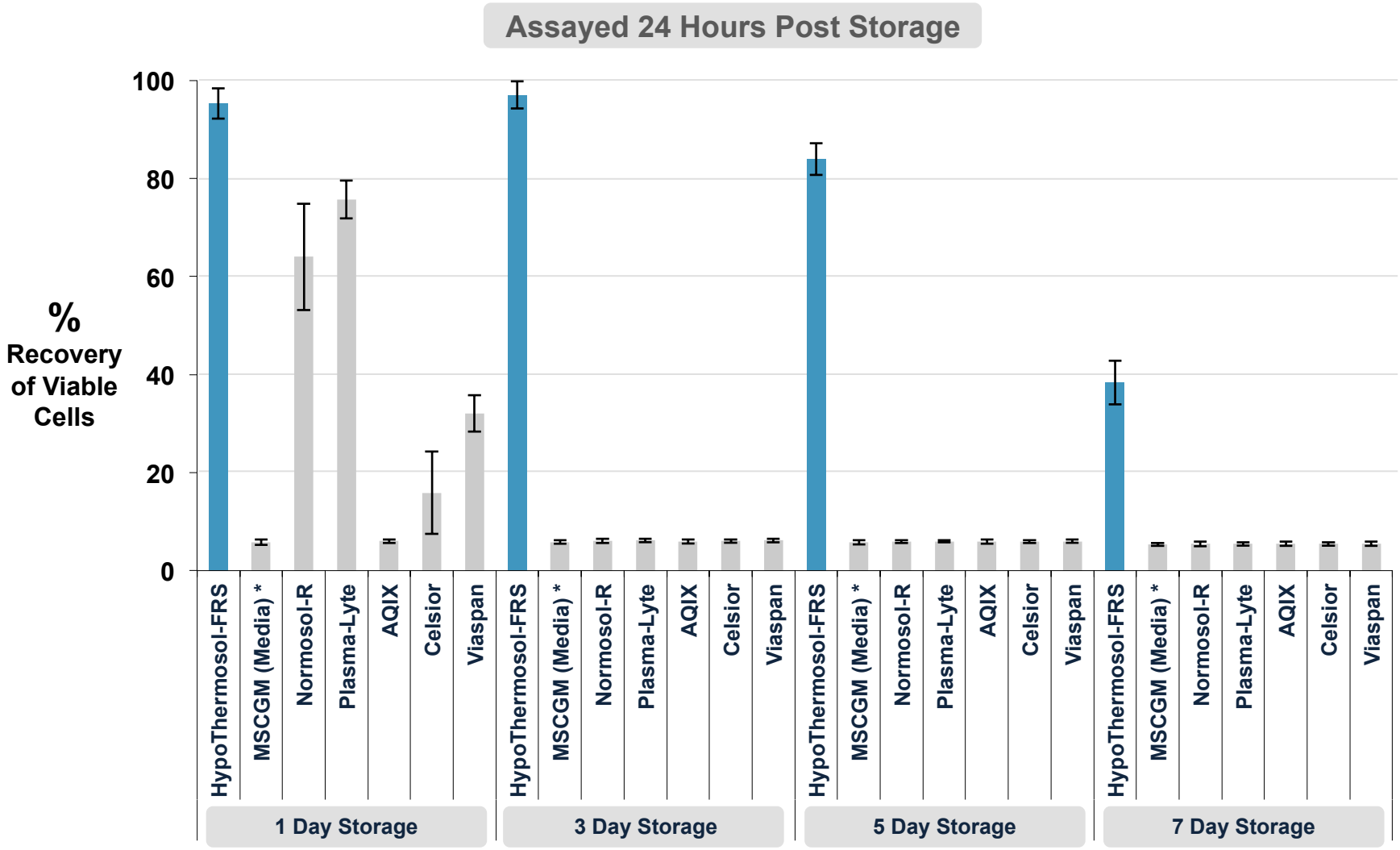
Red
Mitochondria Activation
MitoTracker® Red

Blue
Nuclear Stain
Hoechst

40X magnification

BioLife Solutions®

Extended Hypothermic Storage of Human Mesenchymal Stem Cells Enabled by HypoThermosol®

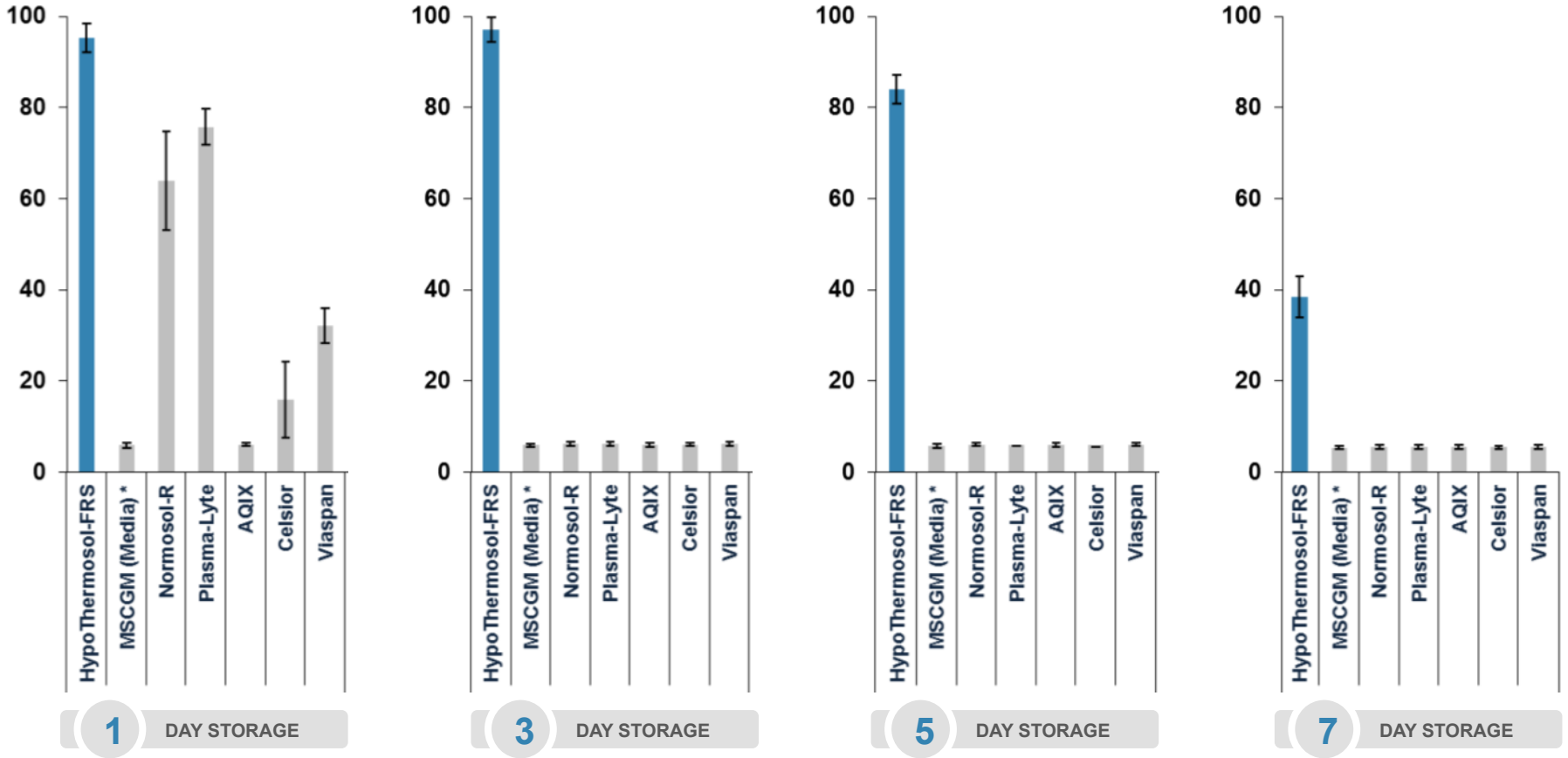


* Contains serum alamarBlue® stain for metabolic activity

BioLife Solutions®

Extended Hypothermic Storage of Human Mesenchymal Stem Cells Enabled by HypoThermosol®

Assayed 24 Hours Post Storage - % Recovery of Viable Cells

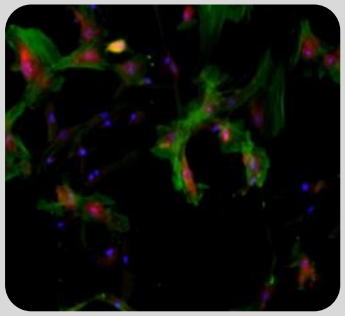


* Contains serum alamarBlue® stain for metabolic activity

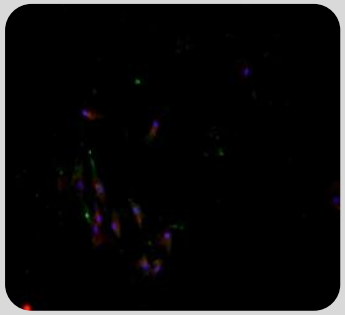
BioLife Solutions®

Representative Fluorescent Micrographs Illustrating Morphology of Human Mesenchymal Stem Cells Stored in HypoThermosol®

Normosol®-R

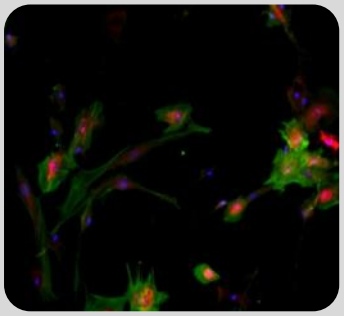


3 Day Storage

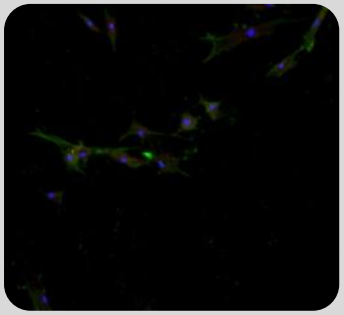


5 Day Storage

Plasma®-Lyte

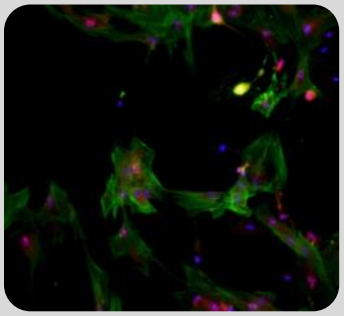


3 Day Storage

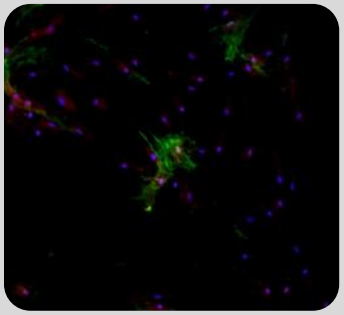


5 Day Storage

Viaspan®

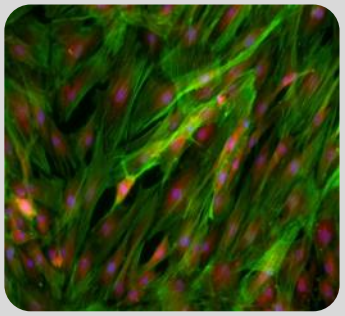


3 Day Storage

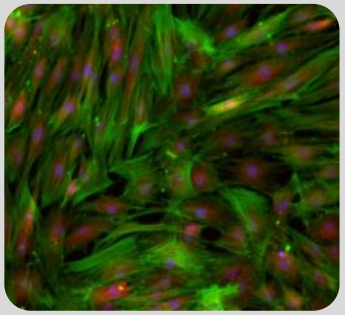


5 Day Storage

HypoThermosol®



3 Day Storage



5 Day Storage

Green
Actin Cytoskeleton
Phalloidin (FITC)

Red
Mitochondria Activation
MitoTracker® Red

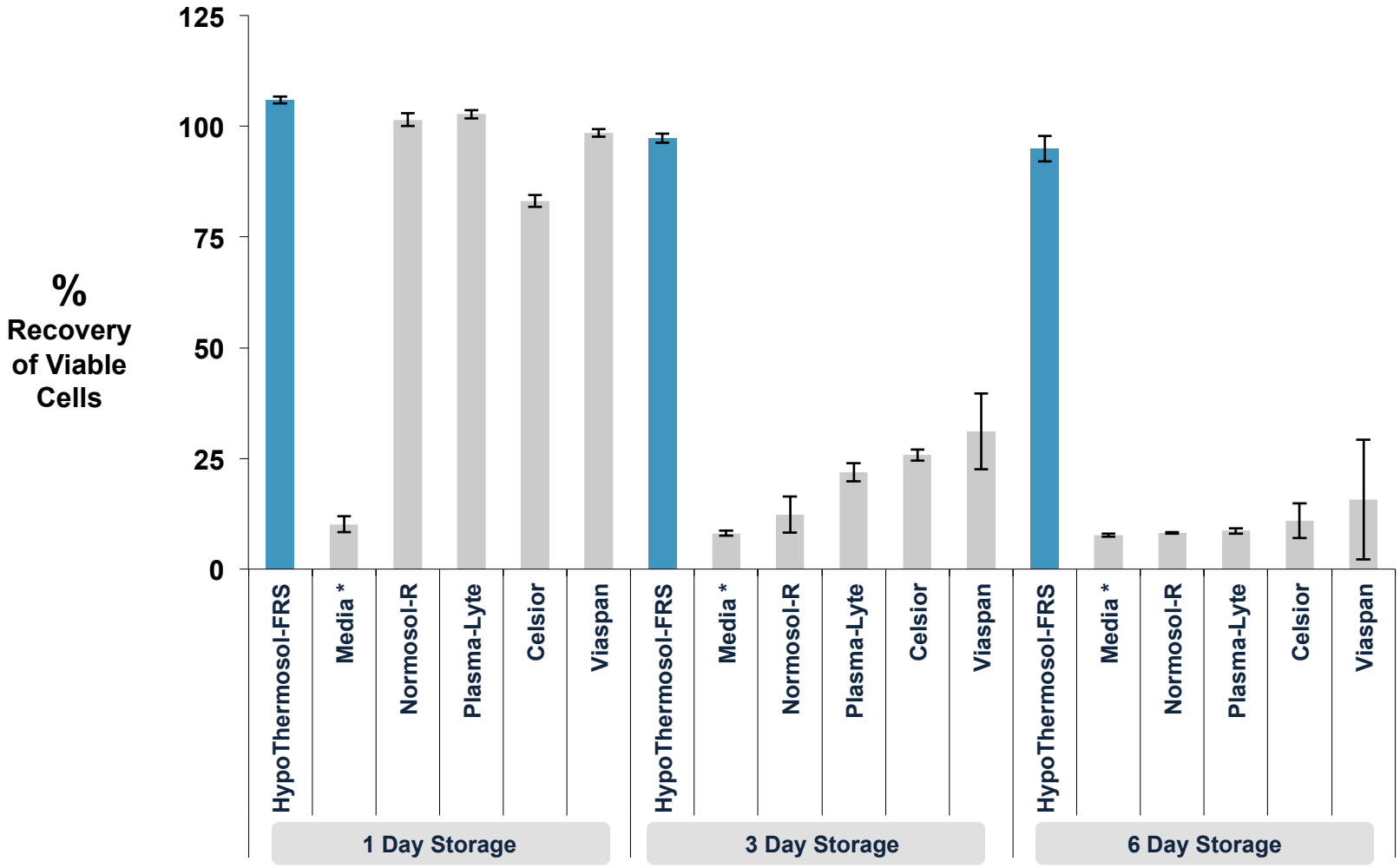
Blue
Nuclear Stain
Hoechst

20X magnification

BioLife Solutions®

Recovery of Human Osteoblast Cells Following Hypothermic Storage Assayed 24 Hours Post Storage

Differentiated Following 5-Day Hypothermic Storage of Undifferentiated hMSC in HypoThermosol®

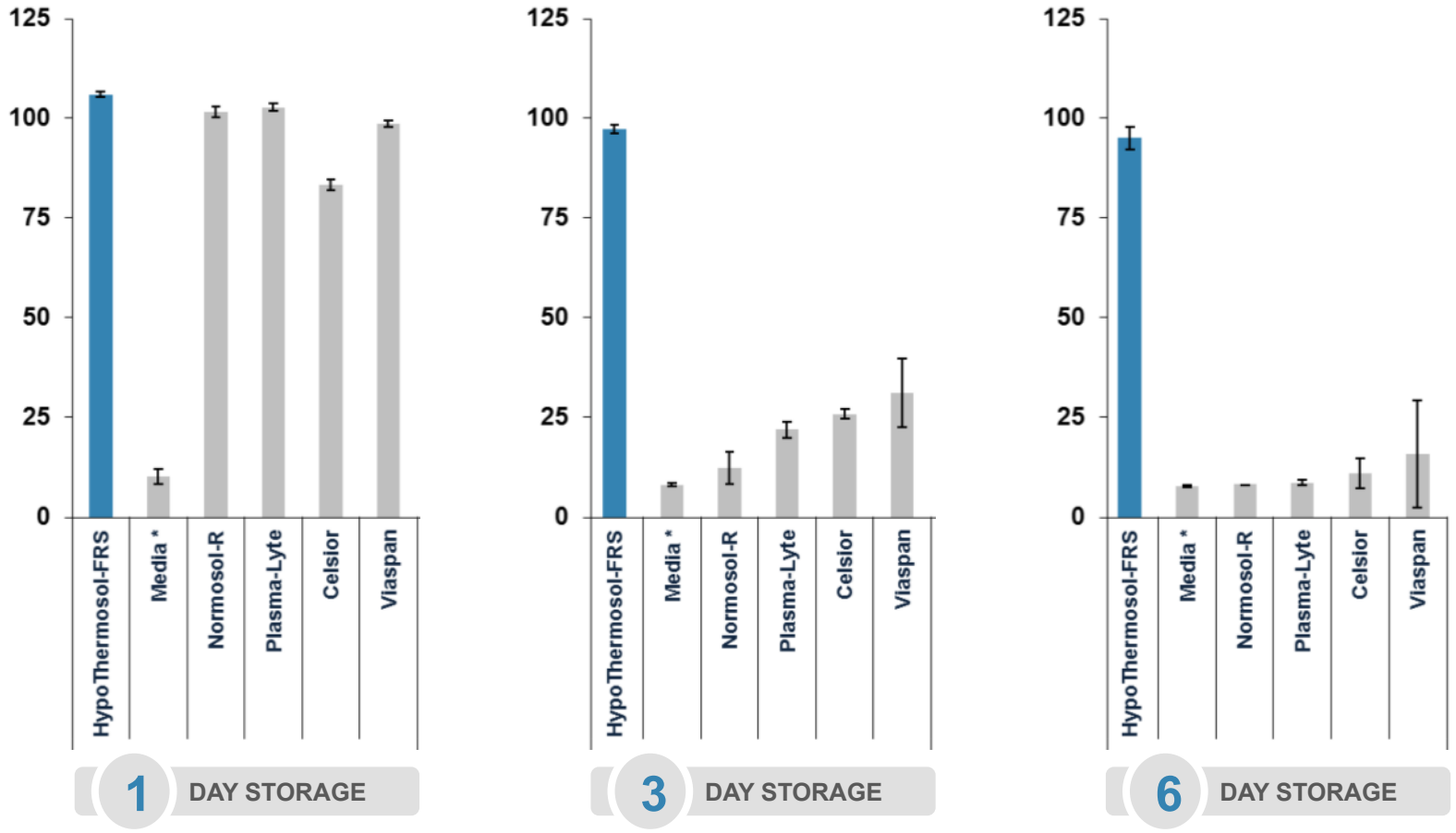


* Contains serum alamarBlue® stain for metabolic activity

BioLife Solutions®

Recovery of Human Osteoblast Cells Following Hypothermic Storage Assayed 24 Hours Post Storage

Differentiated Following 5-Day Hypothermic Storage of Undifferentiated hMSC in HypoThermosol®
Assayed 24 Hours Post Storage - % Recovery of Viable Cells

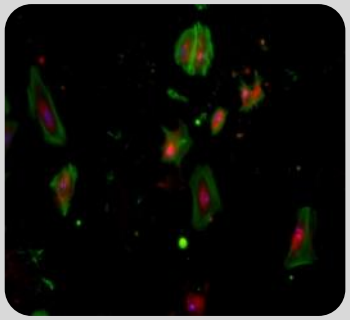
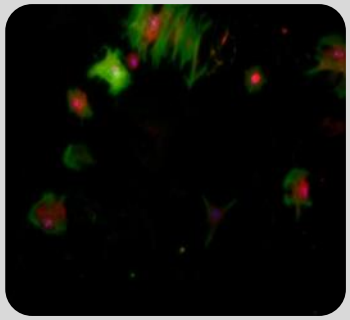
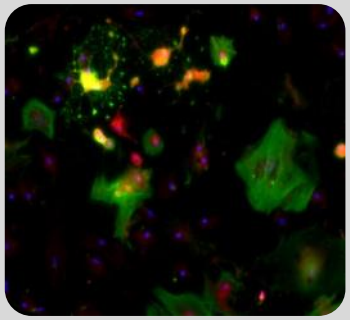
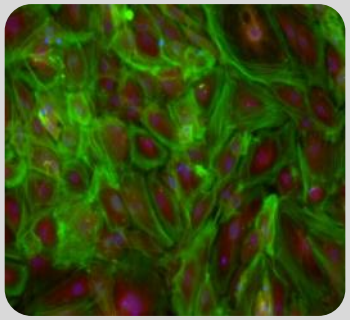
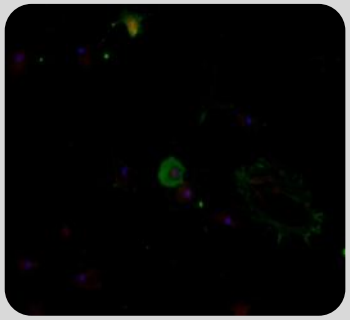
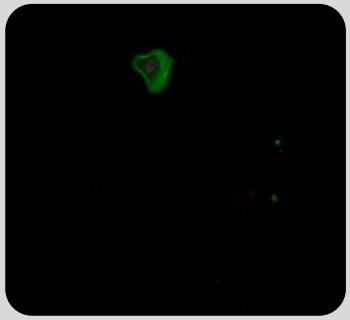
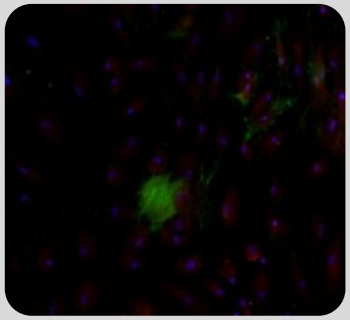
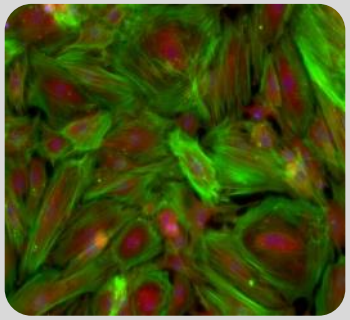


* Contains serum alamarBlue® stain for metabolic activity

BioLife Solutions®

Representative Fluorescent Micrographs Illustrating Morphology of Human Osteoblast Cells Following Hypothermic Storage

Differentiated Following 5 Day Hypothermic Storage of Undifferentiated hMSC in HypoThermosol

Normosol®-R	Plasma®-Lyte	Viaspan®	HypoThermosol®
			
3 Day Storage	3 Day Storage	3 Day Storage	3 Day Storage
			
6 Day Storage	6 Day Storage	6 Day Storage	6 Day Storage

Green
Actin Cytoskeleton
Phalloidin (FITC)

Red
Mitochondria Activation
MitoTracker® Red

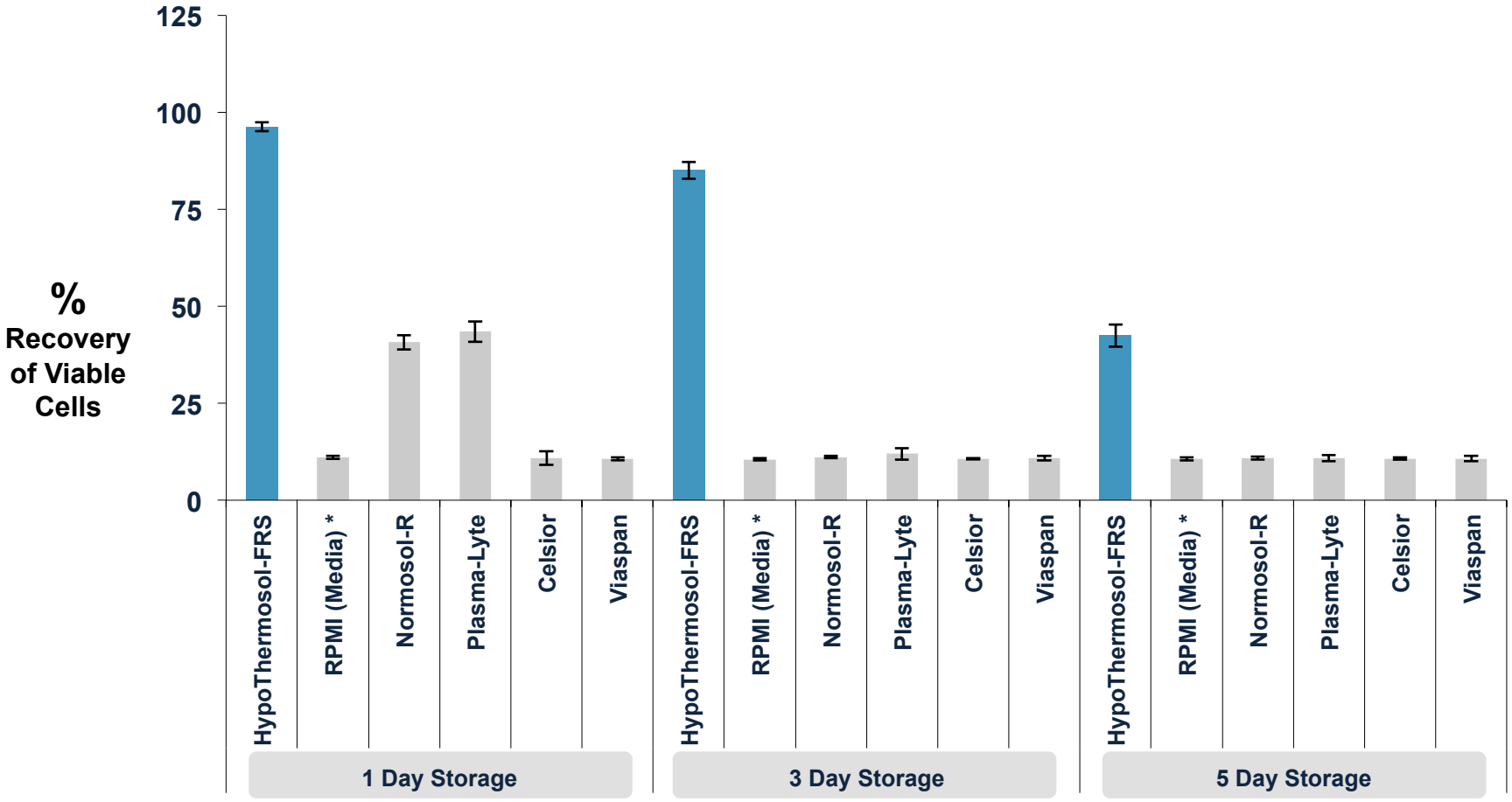
Blue
Nuclear Stain
Hoechst

20X magnification

BioLife Solutions®

24 Hour Post Storage Recovery of Human Dental Pulp Stem Cells Following Hypothermic Storage

Commercial Solution Comparison: Serum and Serum-Free Media

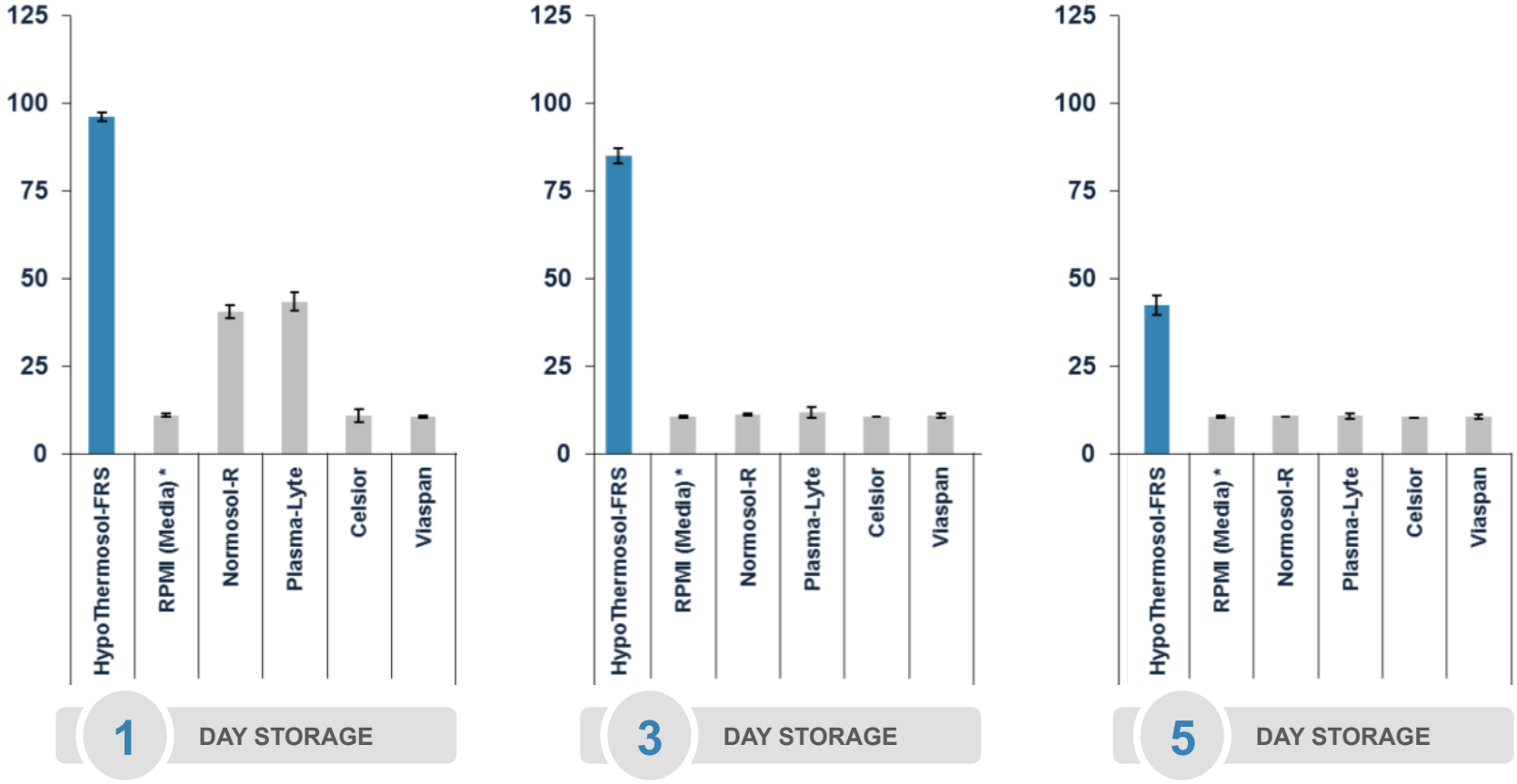


* Contains serum alamarBlue® stain for metabolic activity

BioLife Solutions®

24 Hour Post Storage Recovery of Human Dental Pulp Stem Cells Following Hypothermic Storage

Commercial Solution Comparison: Serum and Serum-Free Media
% Recovery of Viable Cells



* Contains serum alamarBlue® stain for metabolic activity