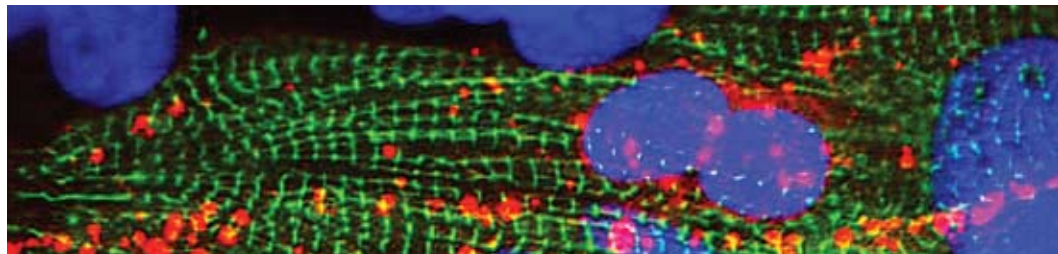
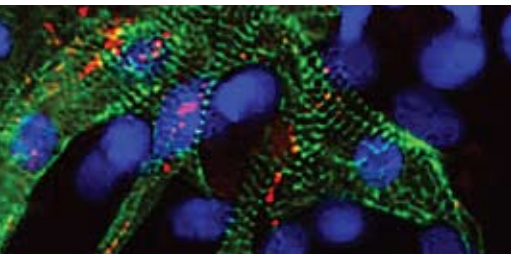
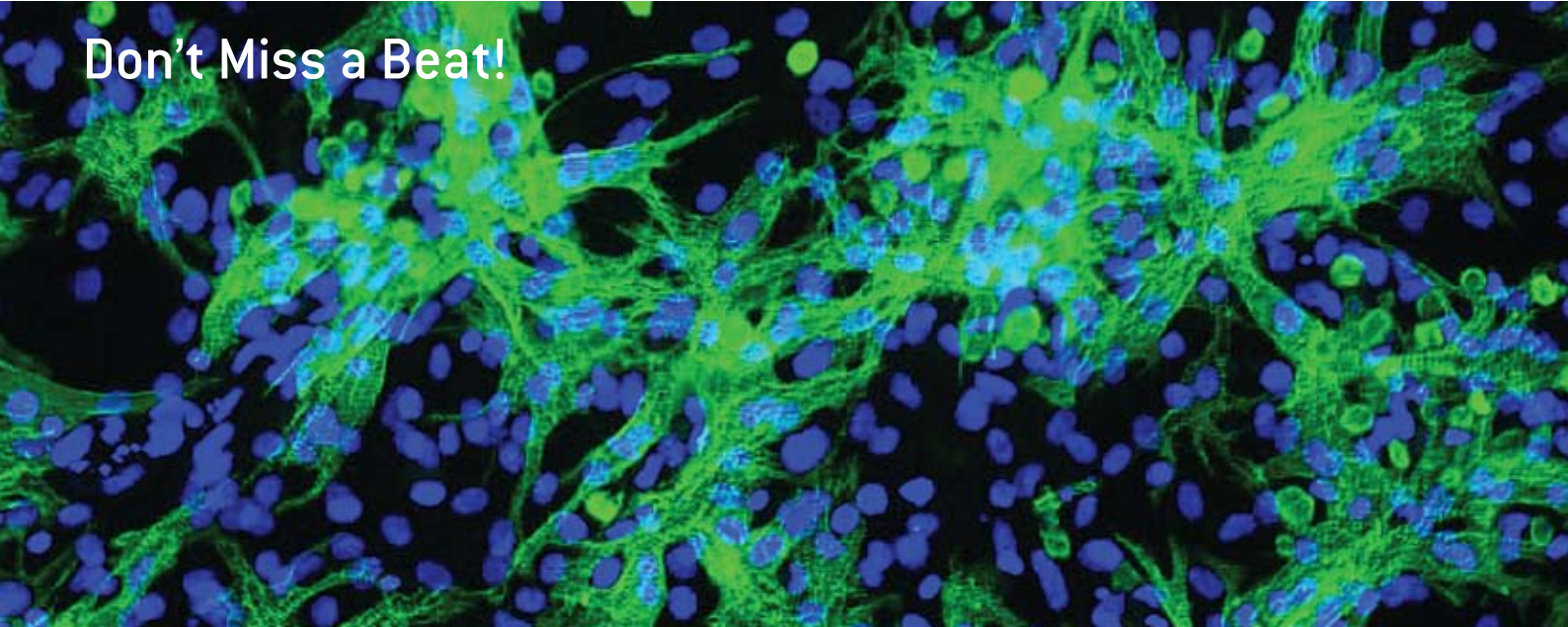


NEW! Clonetics® Rat Cardiac Myocytes

Don't Miss a Beat!



Neonatal ventricular Clonetics® Rat Cardiac Myocytes (P1-3) are high quality primary myocyte cells prepared by standardized methods, and are ready for immediate culture upon thaw.

- Cryopreserved with ≥ 4 million viable cells per ampule at $\geq 85\%$ purity
- Upon thaw, viability is $\geq 80\%$ with excellent morphology and connectivity
- Cells stain positive for actinin, are electrophysiologically active, and display beating after 24 hours in culture

Eliminate the hassle and effort of animal handling, tissue preparation and dissection. Simply thaw and use, or store in liquid nitrogen for experimentation at your convenience.

■ Research Applications:

- Hypertension
- Inflammation
- Cell contraction and physiology
- Ion channel flux
- Cardiac lipid metabolism and lipotoxicity
- Cardiac injury and apoptosis
- Toxicology and cytotoxicity
- Tissue engineering

Cryopreserved Cardiac Myocytes Retain Electrical Activity

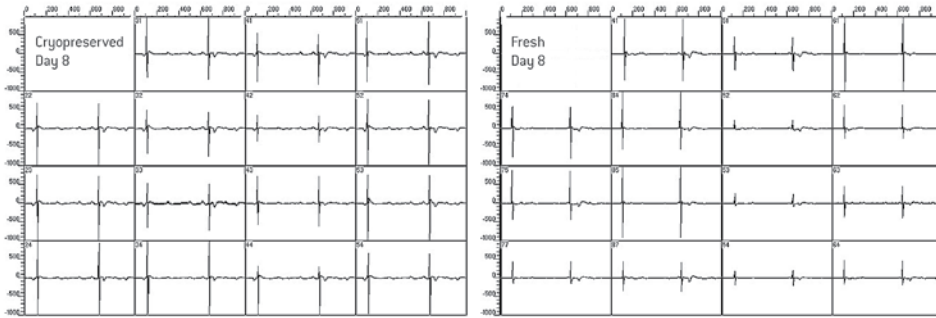


Figure 1. Multi Electrode Array (MEA) recordings of electrical activity from cryopreserved and fresh neonatal Clonetics® Rat Cardiac Myocytes at 8 days in culture. In this example, the image represents a screen capture of the regular, spontaneous electrical activity taking place across 15 of 60 electrodes of the MEA array during a 1 sec. episode. The cardiac myocyte density on the cryopreserved sample electrode had an even distribution but in this instance the fresh culture was sparse over some electrode locations. A major point of note is that the activity is time locked (synchronous) across all electrode locations.

Cardiac Myocytes Responses to Cardioactive Substances

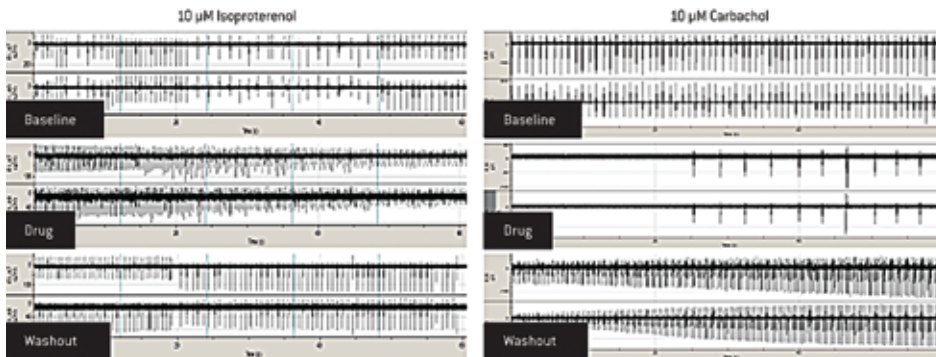


Figure 2. Clonetics® Rat Cardiac Myocytes respond to 10 µM isoproterenol (β adrenergic agonist) and 100 µM carbachol (muscarinic cholinergic agonist). Washout reversed the acute drug effects.

Change in Signal Propagation Upon Heptanol Treatment

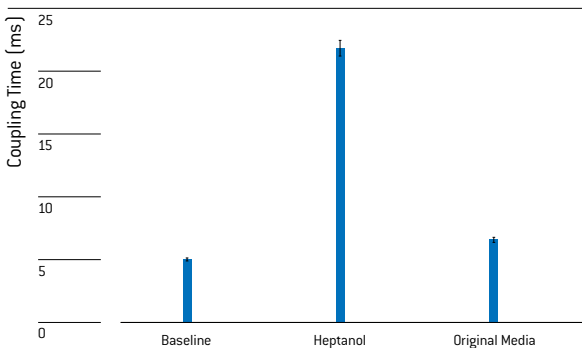


Figure 3. Cryopreserved Clonetics® Rat Cardiac Myocytes were thawed and cultured 47 days. Treatment with 0.5 mM heptanol (reversible gap junction inhibitor) increased coupling time between cells [i.e., between electrodes]. Washout of drug restored the original untreated coupling time. Matrix analysis confirmed that the heptanol induced increase in coupling time was observed throughout the MEA.

Ordering Information

Rat Cardiac Myocytes

Cat. No.	Description	Size
R-CM-561	Neonatal Rat Cardiac Myocytes	≥4 million cells

For information on other related Clonetics® Primary Cells and Media, visit our website at www.lonzabioscience.com

Contact Information

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 Technical Service: 800-521-0390
 E-mail: biotechserv@lonza.com
 Online Ordering: www.lonza.com

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 Technical Service: 32 (0) 87 321 611
 E-mail: techsup.europe@lonza.com
 or techsup.uk@lonza.com
 Online Ordering: www.lonza.com

International

Contact your local Lonza Distributor
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 Fax: 301-845-8291
 E-mail: biotechserv@lonza.com

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