

Rat Cardiac Myocytes

R-CM-561 – Technical sheet

Introduction

Ready-to-use Rat Cardiac Myocytes from neonatal Sprague-Dawley rats (post-natal day 1 or 2) are cell suspensions of high quality primary myocyte cells prepared by dissection/dissociation of both the left and right ventricle by standardized method. They are double panning purified to minimize fibroblasts, and are ready for immediate culture upon thaw. Each vial of rat cardiac myocytes contains approximately 4 million cells at ≥85% purity. This will seed into twenty-six wells of a 96-well plate or ten wells of a 24-well plate using the recommended plating densities and medium. Some cell death will occur during the first few days after plating and debris will be observed - this is normal. When thawed and cultured you will obtain high viability with excellent morphology and connectivity, and cells will display beating at 24 hours in culture.

Cell system components (sold separately)

- One normal rat cardiac myocyte cell product (cryopreserved) (R-CM-561)
- One Rat Cardiac Growth Media BulletKit™ Medium - 200 mL:
RCGM BulletKit™ Medium (CC-4515) contains 200 mL of Rat Cardiac Basal Media (RCBM Medium) and the following supplements: Horse Serum, 15.0 mL; Fetal Bovine Serum (FBS), 15.0 mL; and Gentamicin/Amphotericin-B (GA), 0.2 mL.
- One vial of 5-Bromo-2'deoxyuridine (BrdU), 15.0 mg (Sigma Catalog Number B5002)

Recommended cell culture substrates

Primary rat cardiac myocytes need an appropriate substrate to adhere and survive. The preferred substrate is nitrocellulose. Protocols for the recommended substrates are available on our website at www.bioscience.lonza.com.

Characterization of cells

Each lot of rat cardiac myocytes is tested using mycoplasma PCR, bio-burden assay and immunohistochemistry, including positive immunostaining for actinin, positive Hoechst staining, and positive testing for functional syncytium.

Performance

Plating format	Volume of media to add to 1.0 mL well suspension	Recommended seeding volume after diluting	Number of wells to plate
96-well plate	4.3 mL	200 µL/well	26 wells
24-well plate	9.0 mL	1 mL/well	10 wells

Quality control

The cells test negative for mycoplasma and bacteria. Additional molecular and immunochemical testing for quality is done following conditions that mimic shipping.

Ordering information

Rat Cardiac Myocytes (pooled)

Cat. no.	Product	Description
R-CM-561	Rat cardiac myocyte (CM) cells, cryopreserved	4 million cells in a 1.0 mL cell suspension

Rat Cardiac Growth Media (sold separately):

Cat. no.	Product	Description
CC-4515	RCGM BulletKit™ Medium	200 mL RCBM Basal Medium plus CC-4516 SingleQuots™ Kit to formulate RCGM Medium (growth medium)
CC-3275	RCBM Basal Medium	Rat Cardiac Basal Medium (200 mL)
CC-4516	RCGM SingleQuots™ Kit	Formulates 200 mL of RCBM Basal Medium to RCGM Growth Medium; contains Horse Serum, 15.0 mL; FBS, 15.0 mL; GA, 0.2 mL

Product warranty

Cultures have a finite lifespan *in vitro*.

Lonza guarantees the performance of its cells in the following manner only if Lonza Media and Reagents are used exclusively and the recommend protocols are followed. The performance of cells is not guaranteed if any modifications are made to the complete cell system.

1. Rat Cardiac Myocytes are assured to be viable and functional when thawed and maintained properly.
2. Rat Cardiac Myocytes are cryopreserved immediately after isolation without culturing prior to cryopreservation. Routine characterization of cardiac myocytes includes positive immunostaining for actinin and positive testing for functional syncytium. Lonza guarantees rat cardiac myocytes will express the markers described when plated out of cryopreservation onto nitrocellulose.

When placing an order or to contact Scientific Support, please refer to the product numbers and descriptions listed above. For a complete listing of all Lonza Products, refer to the Lonza website or the current Lonza catalog. To obtain a catalog, additional information or to speak with Scientific Support, you may contact Lonza by web, e-mail, telephone, fax or mail (See page 1 for details).

THESE PRODUCTS ARE FOR RESEARCH USE ONLY. Not approved for human or veterinary use, for application to humans or animals, or for use in clinical or *in vitro* procedures.

WARNING: Handle as a potentially biohazardous material under biosafety level 1 containment. These cells are not known to contain an agent known to cause disease in healthy adult humans. These cells have not been screened for hepatitis B, human immunodeficiency viruses or other adventitious agents. If you require further information, please contact your site safety officer or Scientific Support.

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