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CARDIOMYOCYTE DIFFERENTIATION MEDIUM

CATALOG NUMBER: SCM102

LOT NUMBER:

QUANTITY: 500 mL

DESCRIPTION: The Cardiomyocyte Differentiation Medium has been optimized and qualified for the preferential differentiation of freshly isolated cardiac stem cells derived from rodent origins to cardiomyocytes. Cardiac stem cells maintained in Cardiomyocyte Differentiation Medium for 12-15 days should differentiate into cardiomyocyte and express the appropriate markers, troponin I, desmin, and actinin.

PRESENTATION: Cardiomyocyte Differentiation Medium is a proprietary formulation that contains fetal bovine serum. Sterility Testing: Negative

MATERIALS REQUIRED BUT NOT SUPPLIED:

- Cardiac Stem Cell Isolation Kit (Catalog. No. SCR061)
- Cardiomyocyte Characterization Kit (Catalog No. SCR059)
- Cardiac Stem Cell Maintenance Medium (Catalog No. SCM101)
- Accutase™ Cell Dissociation Solution (Catalog No. SCR005)
- Steriflip 100 μm Nylon Net 25 pk (Catalog No. SCNY00100)

CELL CULTURE PROTOCOL:

1. Carefully remove the medium from the 10-cm tissue culture plate containing the subconfluent or confluent layer of freshly isolated cardiac stem cells (CSCs).
2. Apply 10 mL Cardiomyocyte Differentiation Medium (pre-warmed to 37°C) to the plate.
3. Replace with fresh Cardiomyocyte Differentiation Medium (pre-warmed to 37°C) every 2 to 3 days for 12-15 days.

STORAGE/HANDLING: For long term storage, maintain the media at -20°C. Prior to initial use, thaw frozen media at 4°C overnight or until it has become completely equilibrated. Maintain thawed media at 2-8°C in the dark for up to one month.

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RESULTS:

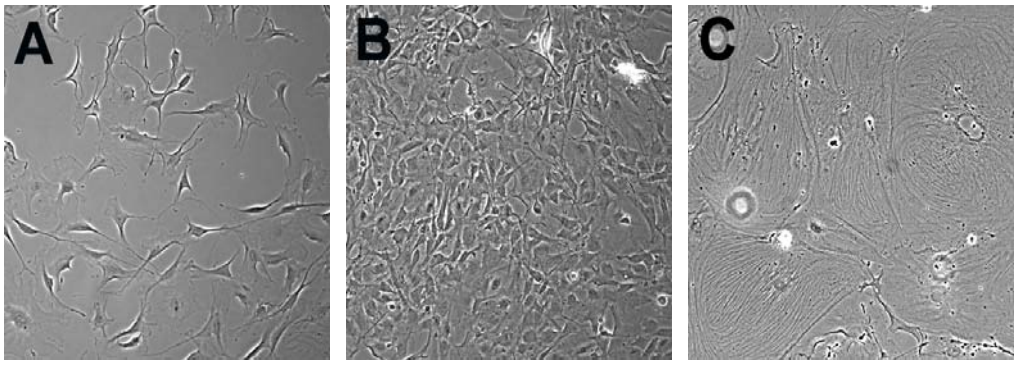

Figure 1. Acutely isolated mouse cardiac stem cells (CSCs) can be cultured, expanded and differentiated into Cardiomyocytes *in vitro*. Representative images of low (A) and high density (B) cultures of purified CSCs cultured in Cardiac Stem Cell Maintenance Medium. CSCs can be differentiated into cardiomyocytes (C) using Cardiomyocyte Differentiation Medium (Cat. No. SCM102). Murine C56/BL6 CSCs were isolated and purifed using Cardiac Stem Cell Isolation Kit (Cat. No. SCR061).

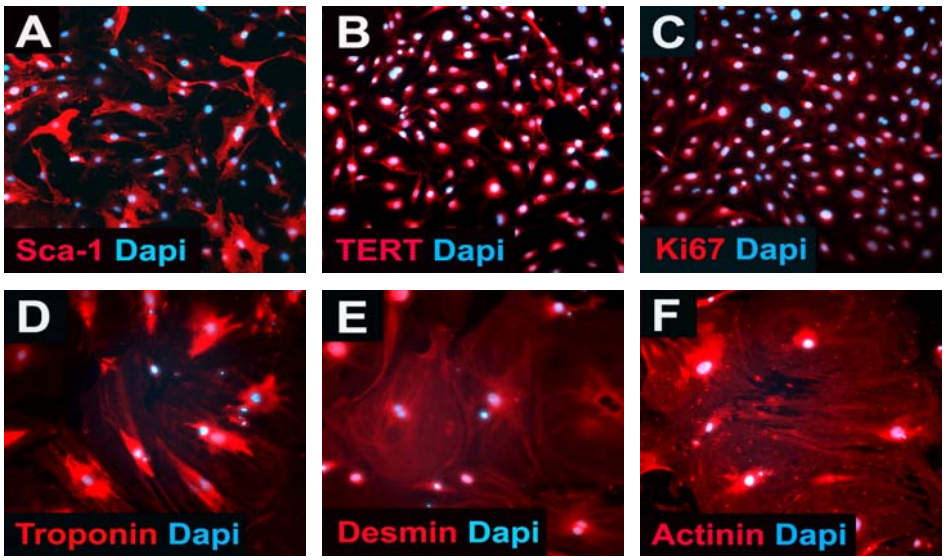

Figure 2. Acutely isolated CSCs cultured in Cardiac Stem Cell Maintenance Medium retain their stem cell characteristcs and efficiently differentiate into cardiomyocytes. One week cultures of purified CSCs ubiquitously express stem cell markers, Sca-1 (**A**) and telomerase (**B**), while remaining in a proliferative state as determined by Ki67 (**C**) immunoreactivity. Differentiated CSCs express mature markers for cardiomyocytes (Cat. No. SCR059), troponin I (**D**), desmin (**E**) and actinin (**F**).

* For color images, please go to www.millipore.com

FOR RESEARCH USE ONLY; NOT FOR USE IN DIAGNOSTIC PROCEDURES. NOT FOR HUMAN OR ANIMAL CONSUMPTION

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