Accepted Manuscript

A defined synthetic substrate for serum free culture of human stem cell derived cardiomyocytes with improved functional maturity identified using combinatorial materials microarrays

Asha K. Patel, Adam D. Celiz, Divya Rajamohan, Daniel G. Anderson, Robert Langer, Martyn C. Davies, Morgan R. Alexander, Chris Denning

PII: S0142-9612(15)00469-X

DOI: 10.1016/j.biomaterials.2015.05.019

Reference: JBMT 16856

To appear in: Biomaterials

Received Date: 28 January 2015

Revised Date: 6 May 2015

Accepted Date: 14 May 2015

Please cite this article as: Patel AK, Celiz AD, Rajamohan D, Anderson DG, Langer R, Davies MC, Alexander MR, Denning C, A defined synthetic substrate for serum free culture of human stem cell derived cardiomyocytes with improved functional maturity identified using combinatorial materials microarrays, *Biomaterials* (2015), doi: 10.1016/j.biomaterials.2015.05.019.

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.



ACCEPTED MANUSCRIPT

1 A defined synthetic substrate for serum free culture of human stem cell derived 2 cardiomyocytes with improved functional maturity identified using 3 combinatorial materials microarrays. 4 Asha K. Patel^{a,b}, Adam D. Celiz^{c,d}, Divya Rajamohan^a, Daniel G. Anderson^{b,e,f,g}, Robert Langer^{b,e,f,g}, Martyn C. Davies^c, Morgan R. Alexander^{c,*} and Chris Denning^{a,*} 5 6 7 ^a Wolfson Centre for Stem Cells, Tissue Engineering and Modeling, University of 8 9 Nottingham, Nottingham, NG7 2RD, UK. ^b David H. Koch Institute for Integrative Cancer Research, Massachusetts Institute of 10 Technology, 500 Main Street, Cambridge, MA 02139, USA. 11 ^c Laboratory of Biophysics and Surface Analysis, School of Pharmacy, University of 12 Nottingham, Nottingham, NG7 2RD, UK. 13 ^d Wyss Institute for Biologically Inspired Engineering at Harvard University, Boston, 14 15 MA 02115, USA ^e Department of Chemical Engineering, Massachusetts Institute of Technology, 500 16 Main Street, Cambridge, MA 02139, USA. 17 18 Institute for Medical Engineering and Science Massachusetts Institute of 19 Technology, 500 Main Street, Cambridge, MA 02139, USA. 20 ^g Harvard-MIT Division of Health Science and Technology, Massachusetts Institute of 21 Technology, 500 Main Street, Cambridge, MA 02139, USA. 22 23 ^{*}Corresponding authors. e-mail: chris.denning@nottingham.ac.uk and morgan.alexander@nottingham.ac.uk 24 25 26 27 Cardiomyocyte, Keywords: Stem cell, Cell adhesion, Cell spreading, Electrophysiology, Surface analysis. 28 29 30 31

Download English Version:

https://daneshyari.com/en/article/6485583

Download Persian Version:

https://daneshyari.com/article/6485583

Daneshyari.com