Materials List for:

Stencil Micropatterning of Human Pluripotent Stem Cells for Probing Spatial Organization of Differentiation Fates

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Materials

Name	Company	Catalog Number	Comments
2 mm thick PDMS sheet	Specialty Silicone Products Inc., USA	SSPM823-.005	Used to form reservoir for stencil
120-150 µm thick PDMS sheet	Specialty Silicone Products Inc., USA	SSPM823-.040	Used to form stencil
60 mm Petri dish	Nunc Nunclon Delta	150326	Substrate for micropatterning
Accutase	Accutase, Merck Millipore, Singapore	SCR005	Enzyme to break H9 cells into single cells
Activin	R&D Systems, Singapore	338-AC-010	Growth factor for H9 differentiation
BMP4	R&D Systems, Singapore	338-BP-010	Growth factor for H9 differentiation
Plasma system	Femto Science, Korea	CUTE-MP	For plasma oxidation of stencil
Dispase	StemCell™ Technologies, Singapore	7923	Enzyme used to weaken the cell-ECM adhesion during passaging
DMEM/F12	GIBCO, USA	11330032	Basal medium for H9 cells
FGF2	R&D Systems, Singapore	233–FB–025	Growth factor for H9 differentiation
H9 cell line	WiCell Research Institute, Inc., USA	WA09	Human embryonic stem cells
hESC-qualified basement membrane matrix	Matrigel, BD Biosciences, Singapore	354277	Extra-cellular matrix coating to support growth of H9 cells
Inverted microscope	Leica Microsystems, Singapore	DMi1	For capturing bright-field images
Laser cutter	Epilog Helix 24 Laser System		Used to generate through holes in PDMS sheet
mTeSR™1 medium	StemCell™ Technologies, Singapore	5850	Maintainence medium for H9 cells
PDMS	SYLGARD® 184, Dow Corning Co., USA	3097358-1004	Used for sticking the PDMS stencil and reservior
ROCKi Y27632	Calbiochem, Merck Millipore, Singapore	688000	Maintains H9 cells as single cells
STEMdiff™ APEL™ medium	StemCell™ Technologies, Singapore	5210	Differentiation medium for H9 cells
Polyethylene terephthalate film	SureMark Singapore	SQ-6633	Used to form stencil
Cell culture compatible non-ionic surfactant	Pluronic acid F-127, Sigma, Singapore	P2443	Passivating reagent to repel cell adhesion in non-micropatterned substrates

