

SUPPLEMENTARY MATERIAL

corresponding to:

**Growth factor-defined culture medium
for human mesenchymal stem cells**

SUMIYO MIMURA, NAOHIRO KIMURA, MITSUHI HIRATA, DAIKI TATEYAMA,
MIDORI HAYASHIDA, AKIHIRO UMEZAWA, ARIHIRO KOHARA, HIROKI NIKAWA,
TETSUJI OKAMOTO and MIHO K. FURUE*

SUPPLEMENTARY TABLE 1

THE COMPOSITION OF MEDIA USED FOR
SERUM-FREE CULTURE OF hMSC

	hESF9**	hESF9(-/-)	D-hESF10
Basal medium	ESF*	ESF*	ESF*
HEPES (3574.5 mg/liter)	-	-	-
L-ascorbic acid-2-phosphate (100 µg/ml)	+	+	-
6 factors			
Human recombinant insulin (10 µg/ml)	+	+	+
Human transferrin (5 µg/ml)	+	+	+
2-Mercaptoethanol (10 µM)	+	+	+
2-Ethanolamine (10 µM)	+	+	+
Sodium selenite (20 nM)	+	+	+
Oleic acid conjugated with fatty acid-free bovine serum albumin (9.4 µg/ml)	+	+	+
Bovine heparan sulfate sodium salt	100 ng/ml	-	1000 ng/ml
Human recombinant FGF-2	10 ng/ml	-	10 ng/ml
Human TGF-β1	-	-	5 ng/ml

*The composition of the basal medium, ESF, is described in Furue *et al.*, 2005.

**hESF9 medium is described in Furue *et al.*, 2008.

SUPPLEMENTARY TABLE 2

A LIST OF PRIMER SET CATALOGUE NUMBERS

Gene name	Abbreviation	ABI Assay ID	Product size
integrin-binding sialoprotein	IBSP	Hs00173720_m1	95
sparc/osteonectin, cwcv and kazal like domains proteoglycan (testican) 2	SPOCK2	Hs00360339_m1	85
carcinoembryonic antigen-related cell adhesion molecule 1 (biliary glycoprotein)	BGP	Hs00989783_m1	80
secreted phosphoprotein 1	SPP1	Hs00960641_m1	92
endoglin	CD105	Hs00923996_m1	64
Thy-1 cell surface antigen	THY1	Hs00174816_m1	60
integrin, beta 1 (fibronectin receptor, beta poly peptide, antigen CD29 includes MDF2, MSK12)	ITGB1	Hs01127547_m1	79
POU class 5 homeobox 1	POU5F1	Hs03005111_g1	64
SRY (sex determining region Y)-box 2	SOX2	Hs01053049_s1	91
Nanog homeobox	NANOG	Hs02387400_g1	109
glyceraldehyde-3-phosphate dehydrogenase	GAPDH	Hs99999905_m1	122

SUPPLEMENTARY TABLE 3

A LIST OF THE USED ANTIGENS

Primary antibody	Company	Dilution ratio
MC631 (anti-SSEA3) (Shevinsky <i>et al.</i> , 1982)	provided by Prof. P.W.Andrews	
CD44-FITC	Beckman Coulter	1:20
CD45-FITC	Dako, Carpinteria, CA	2µg/ml
CD56	Dako	5µg/ml
CD73-PE	BD Biosciences, San Jose, CA	1:20
CD90-FITC	Dako	1µg/ml
CD105-PE	Beckman Coulter	1:20
TRA-2-54	provided by Prof. P.W.Andrews	