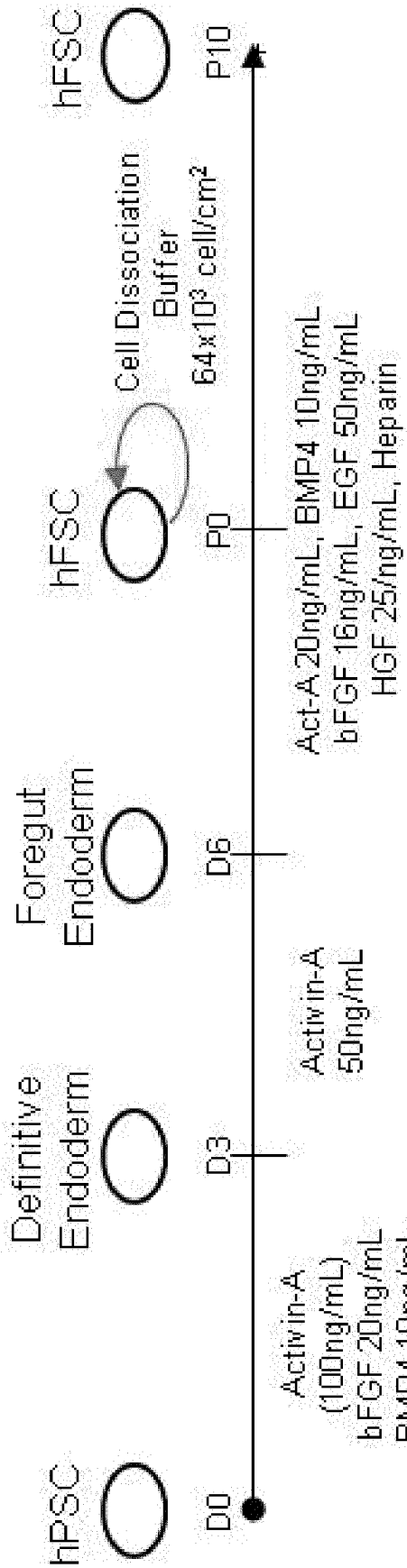

hPSC
D0
Activin-A
(100ng/mL)
bFGF 20ng/mL
BMP4 10ng/mL
LY
Definitive
Endoderm
D3
Activin-A
50ng/mL
Foregut
Endoderm
D6
Act-A 20ng/mL, BMP4 10ng/mL
bFGF 16ng/mL, EGF 50ng/mL
HGF 25/ng/mL, Heparin
hFSC
P0
Cell Dissociation
Buffer
64x10³ cell/cm²
hFSC
P10

Figure 1A

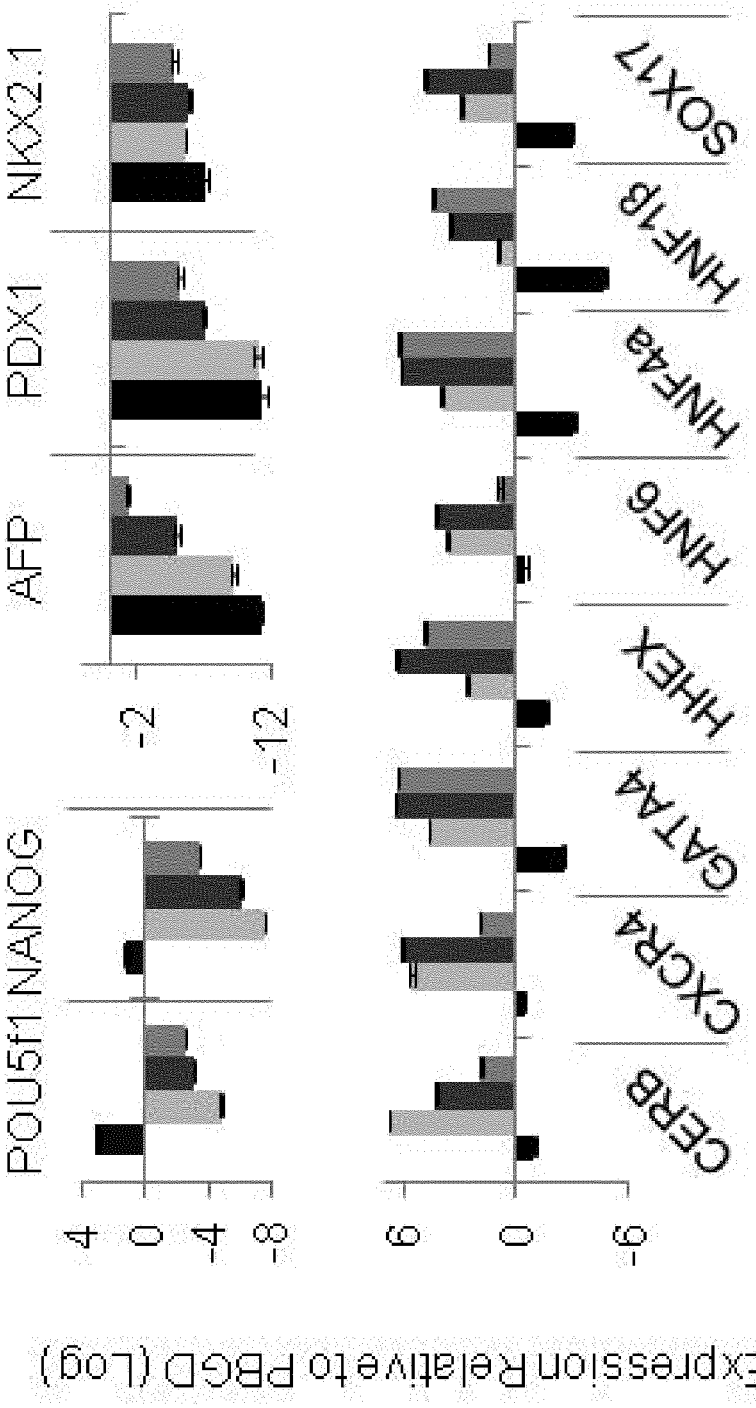

Expression Relative to PBGD (Log)
POU5f1 NANOG
AFP PDX1 NKX2.1
CER8 CXCR4 GATA4 HHEX HNF6 HNF4a HNF1B SOX17
4 0 -4 -8
-2 -12
6 0 -6

Figure 1B

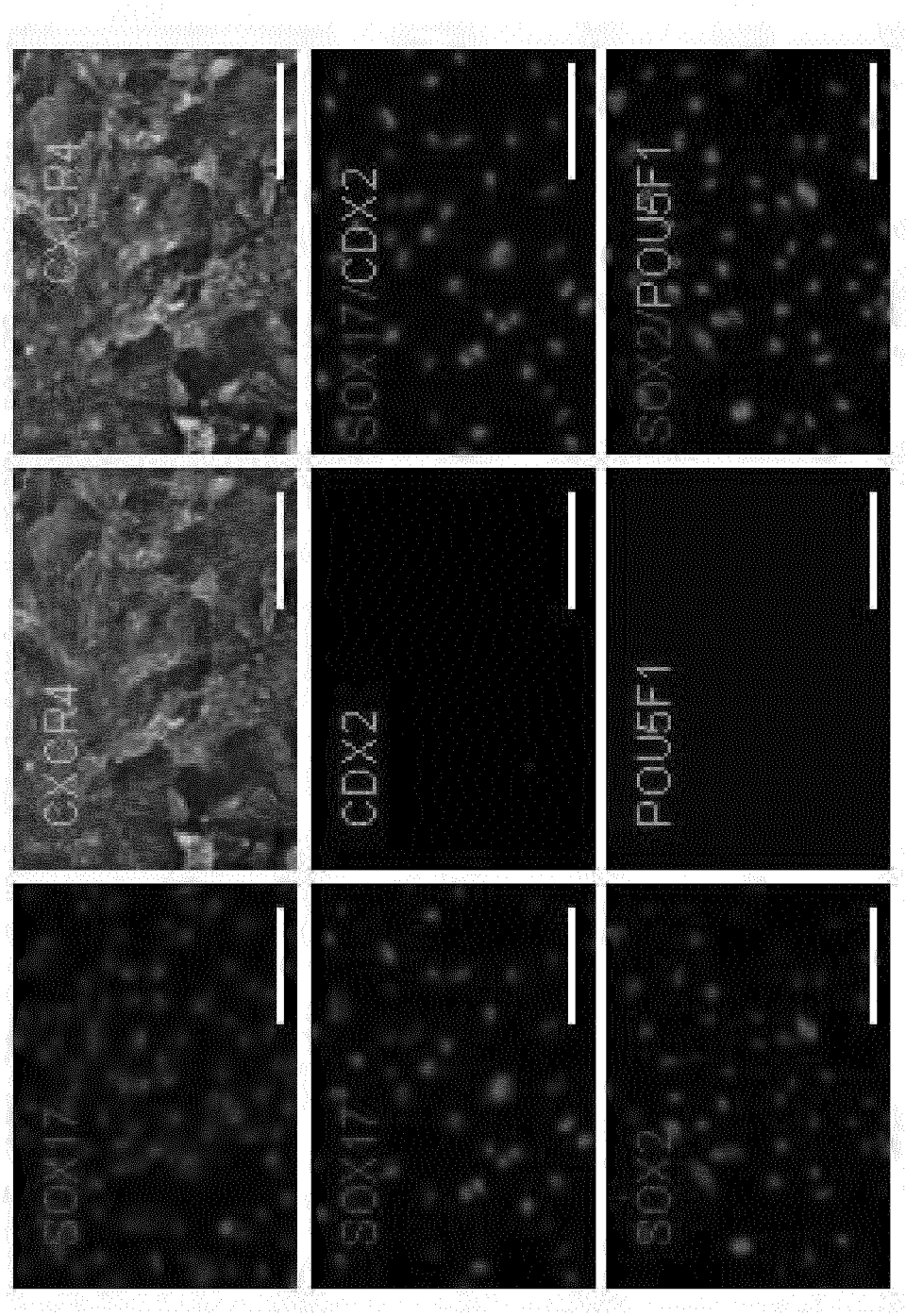


Figure 1C

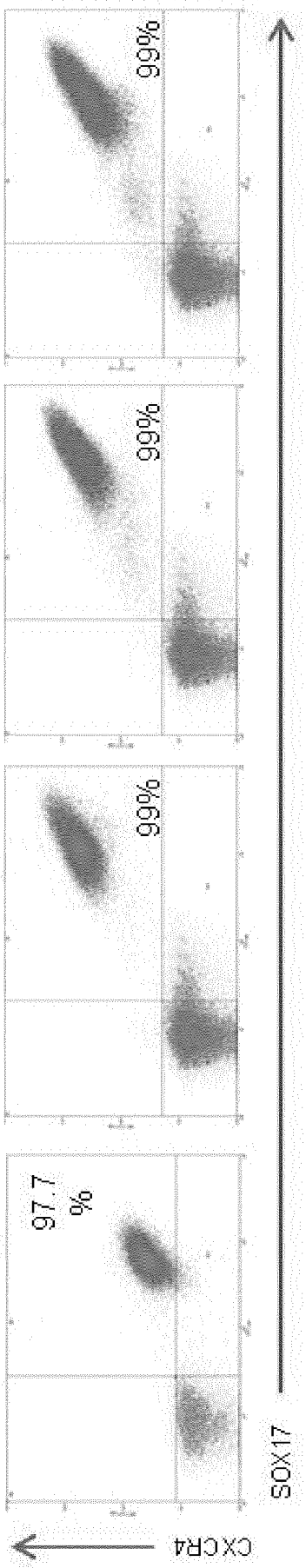

hESC
Early Passage
97.7
%
hESC
Late Passage
99%
BBHX8
Late Passage
99%
A1ATD.1
Late Passage
99%
CXCR4
SOX17

Figure 1D

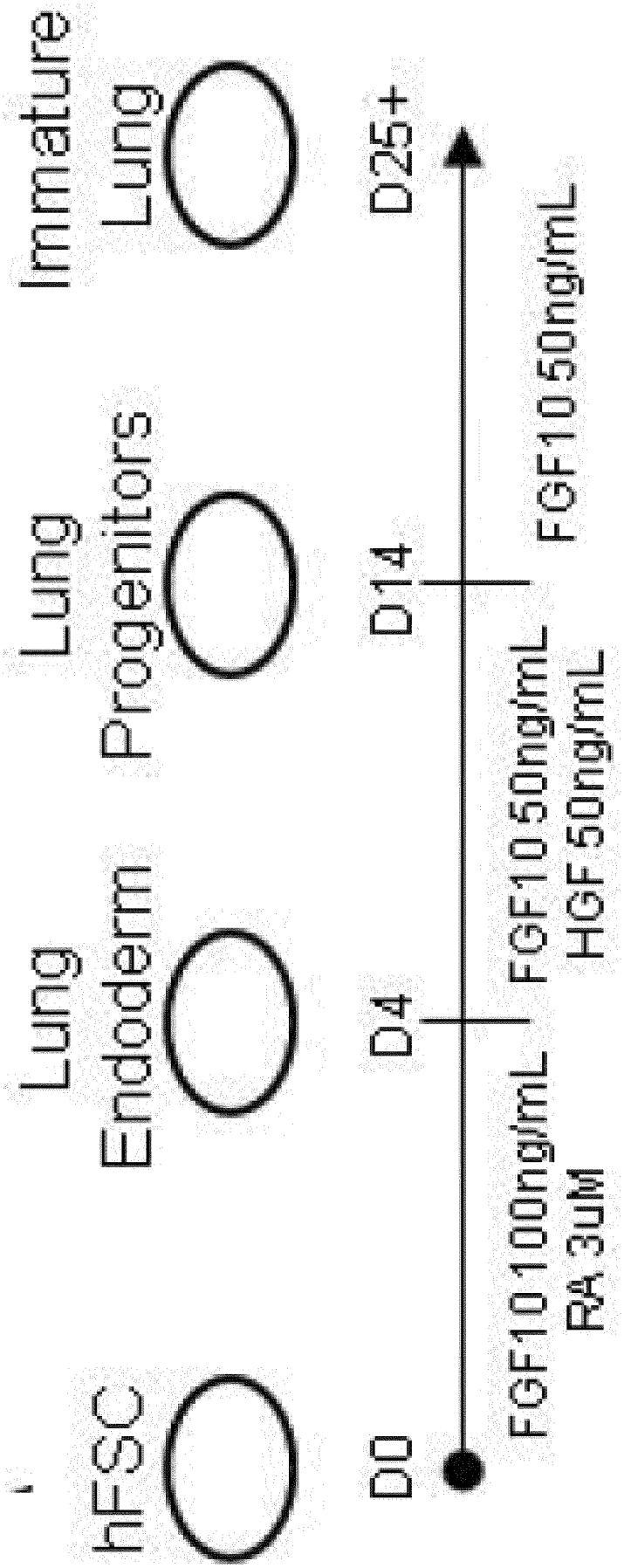

hFSC
Lung Endoderm
Lung Progenitors
Immature Lung
D0
D4
D14
D25+
FGF10 100ng/mL
RA 3uM
FGF10 50ng/mL
HGF 50ng/mL
FGF10 50ng/mL

Figure 2A

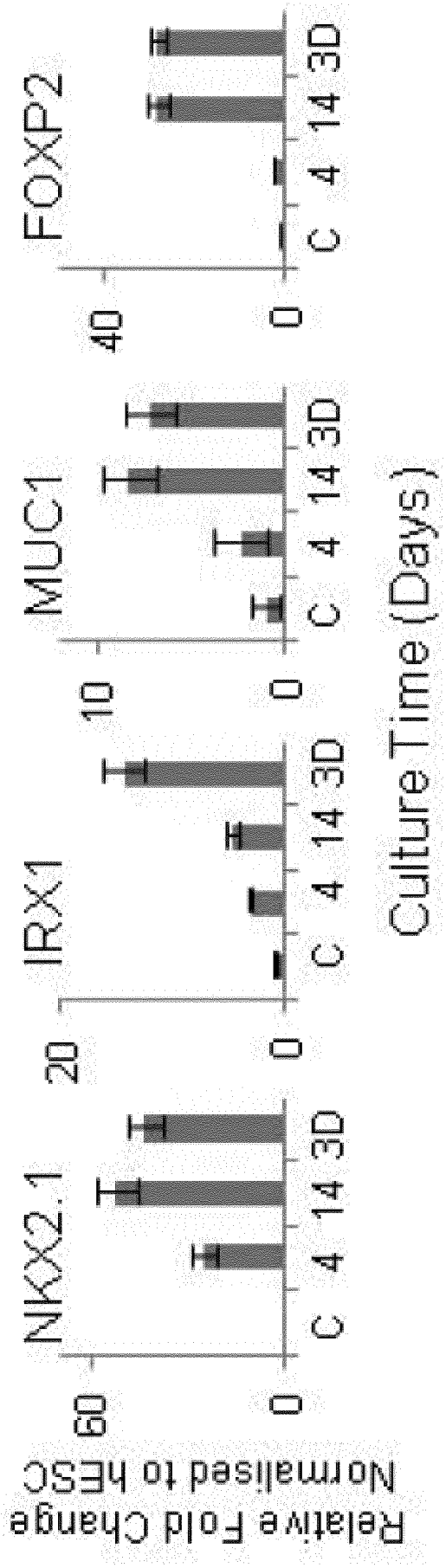

NKX2.1
IRX1
MUC1
FOXP2
Relative Fold Change Normalised to hESC
60
0
20
0
10
0
40
0
C 4 14 3D
Culture Time (Days)

Figure 2B

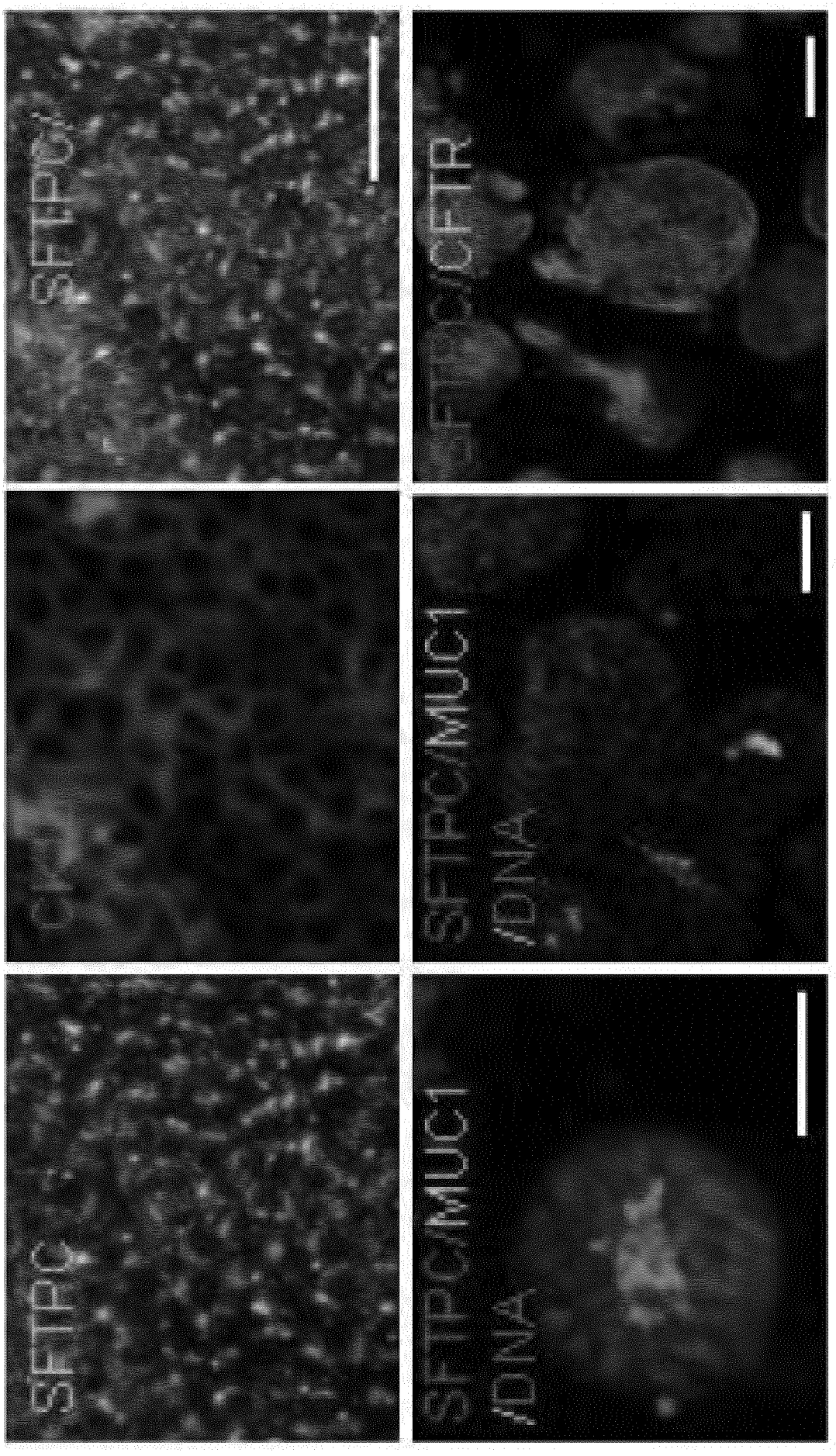


Figure 2C

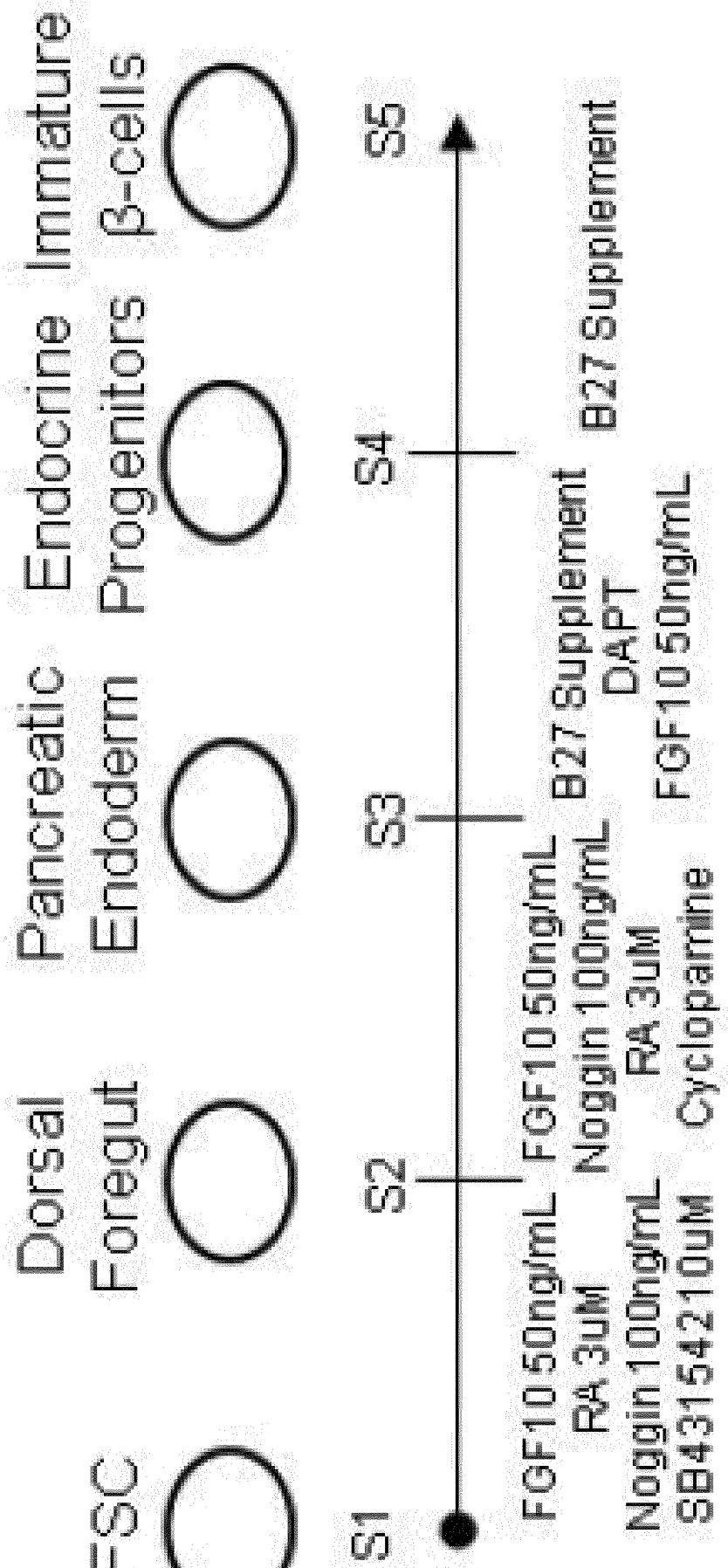

hFSC
Dorsal Foregut
Pancreatic Endoderm
Endocrine Progenitors
Immature β-cells
S1
S2
S3
S4
S5
FGF10 50ng/mL
RA 3uM
Noggin 100ng/mL
SB431542 10uM
FGF10 50ng/mL
Noggin 100ng/mL
RA 3uM
Cyclopamine
B27 Supplement
DAPT
B27 Supplement
FGF10 50ng/mL

Figure 2D

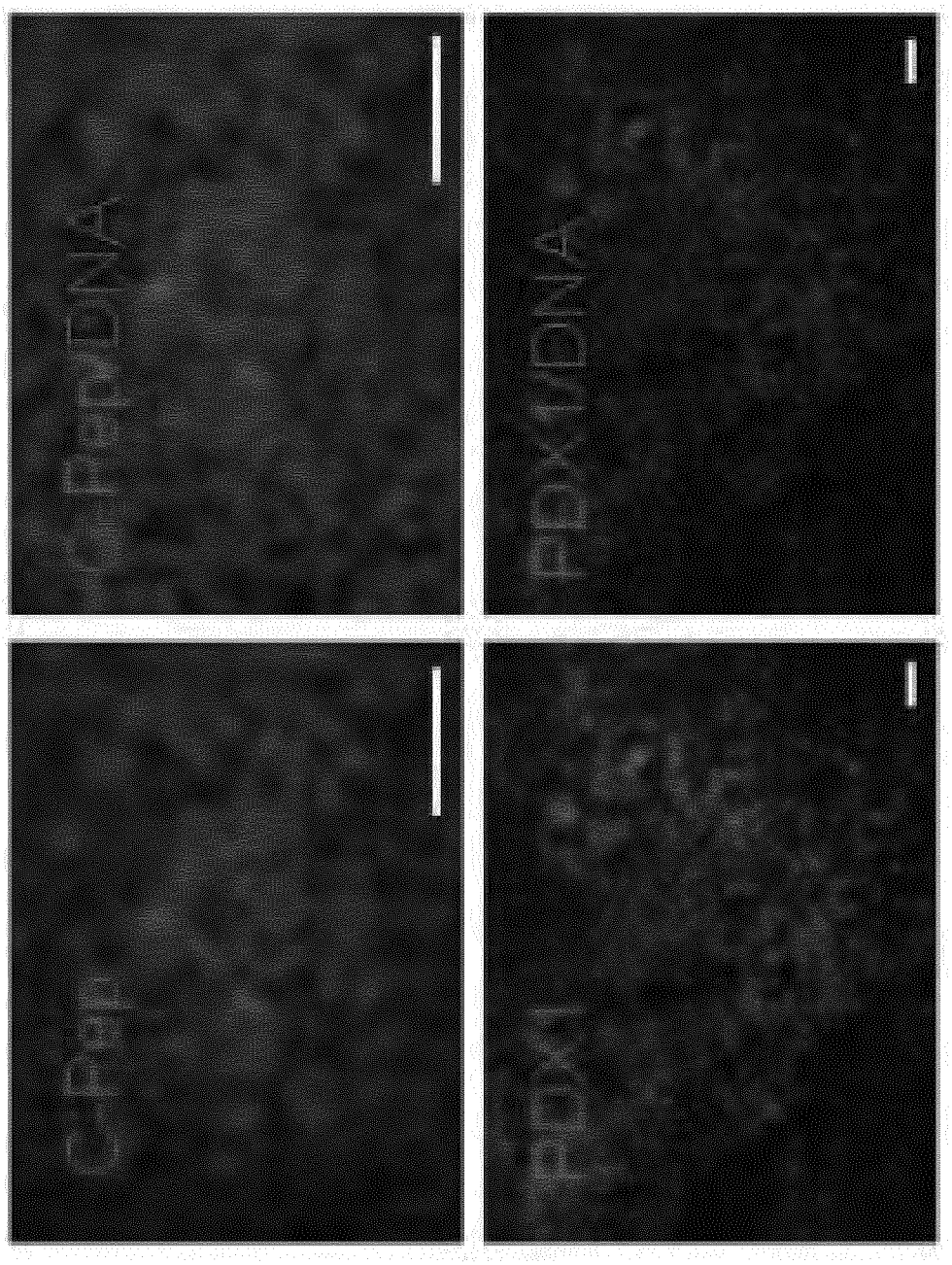


Figure 2E

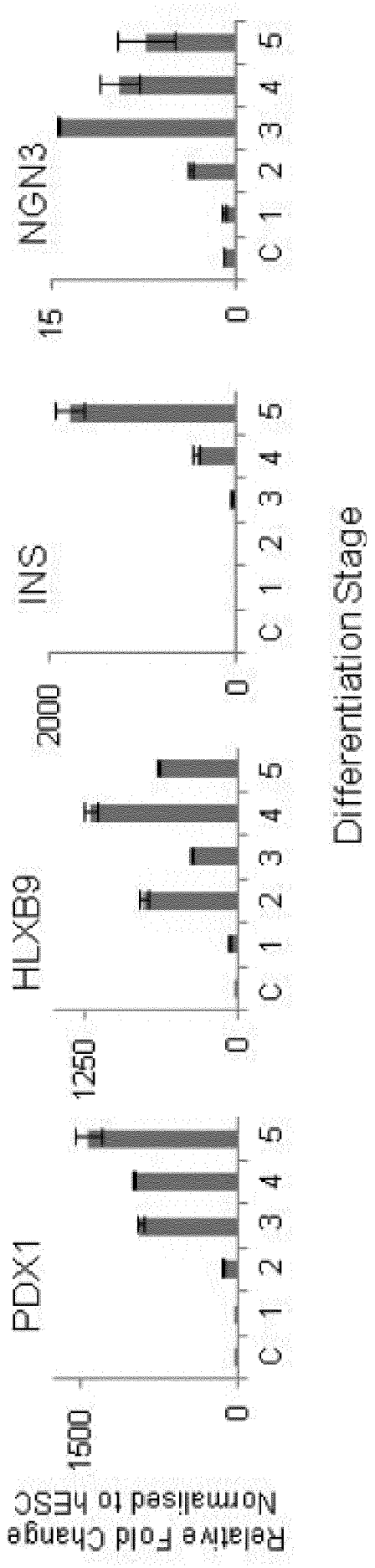


Figure 2F

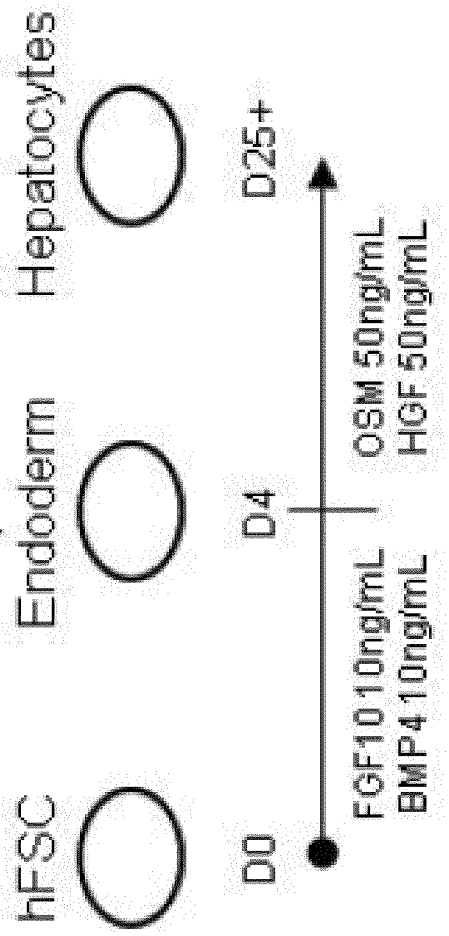


Figure 2G

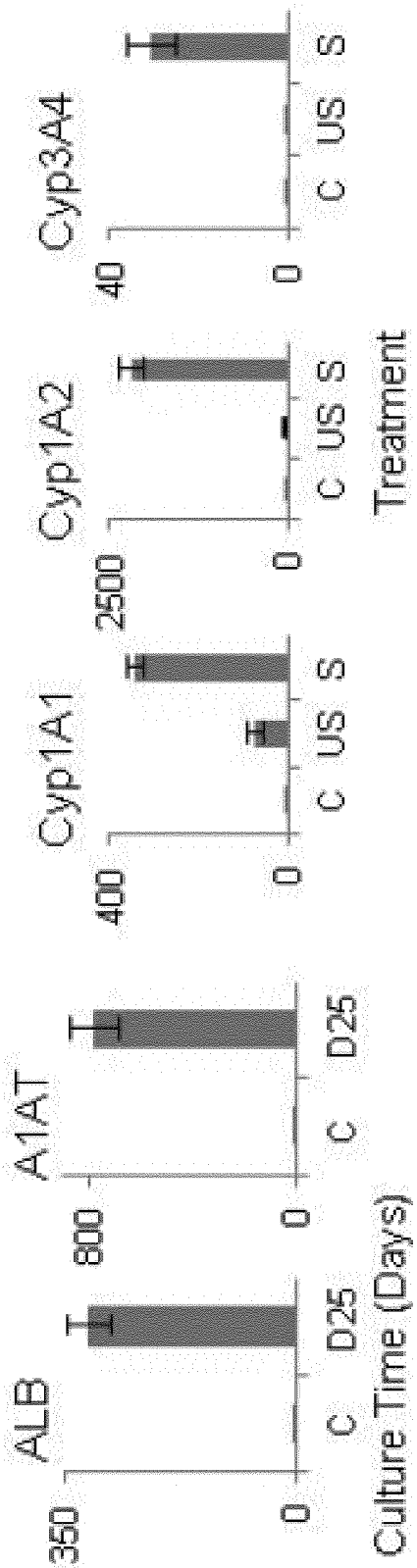

AFP
100
0
C
D25
ALB
350
0
C
D25
A1AT
800
0
C
D25
Culture Time (Days)
Cyp1A1
400
0
C
US
S
Cyp1A2
2500
0
C
US
S
Cyp3A4
40
0
C
US
S
Treatment

Figure 2H

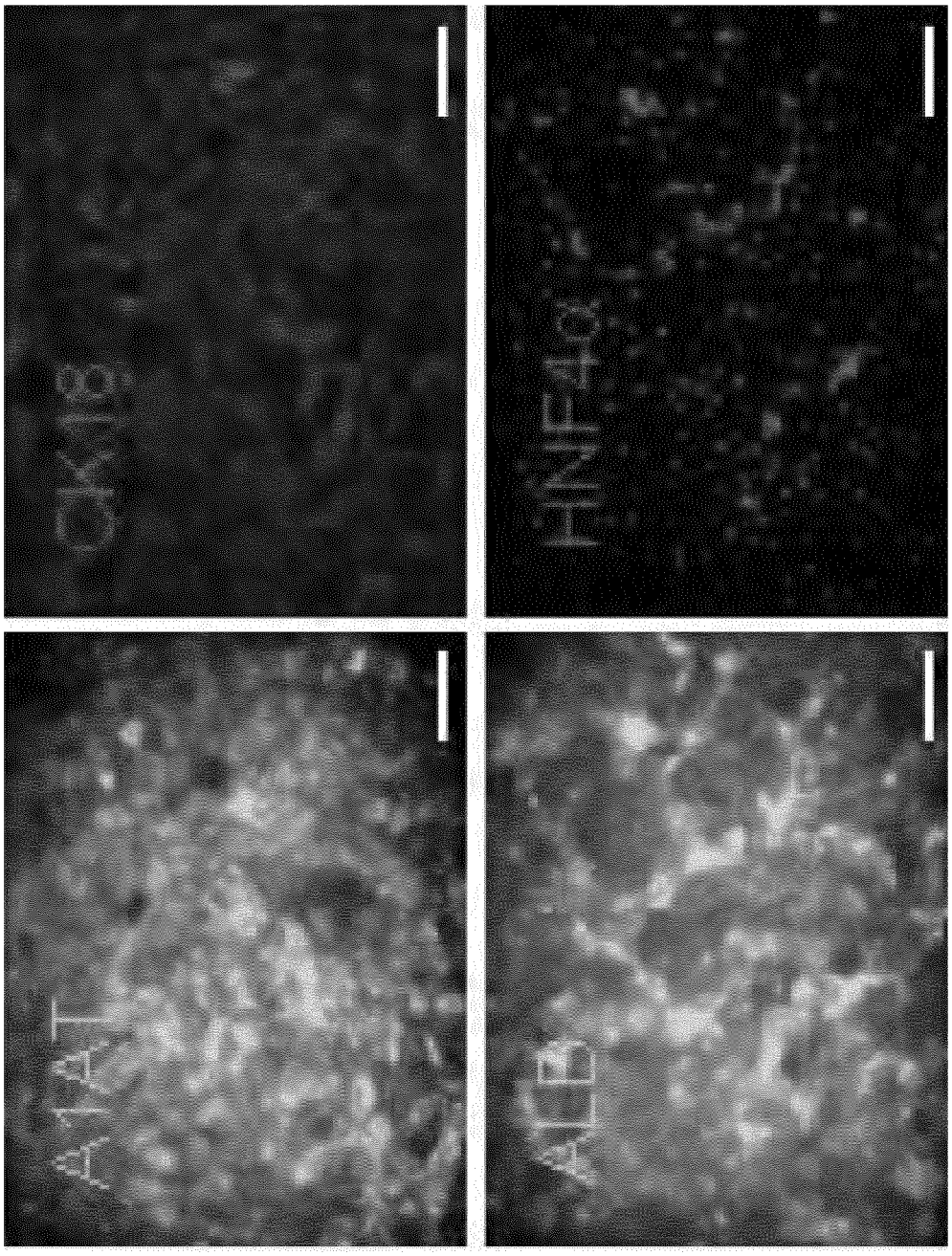


Figure 2I

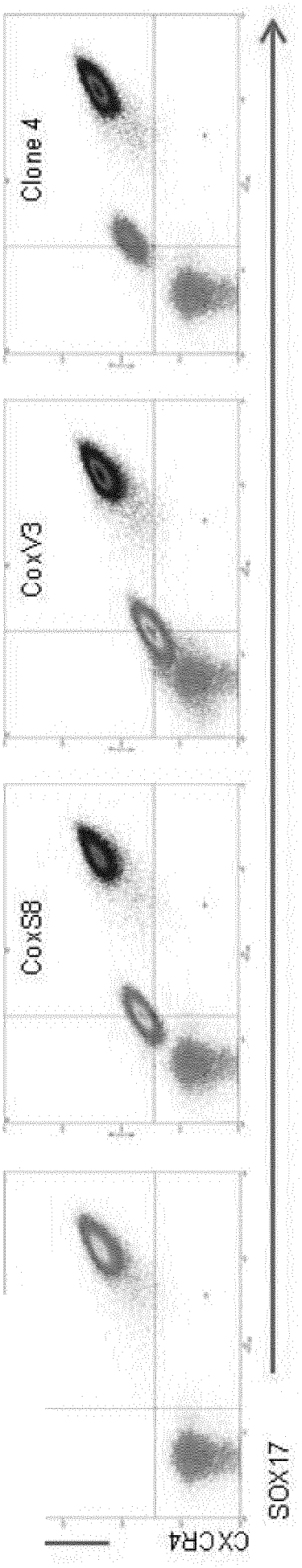


Figure 3A

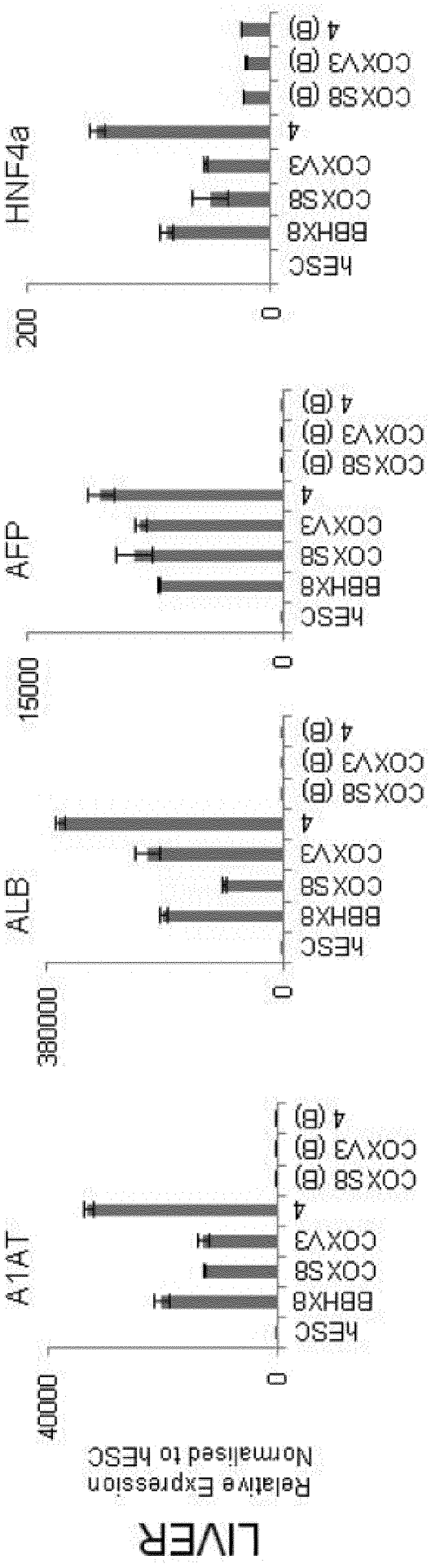


Figure 3B

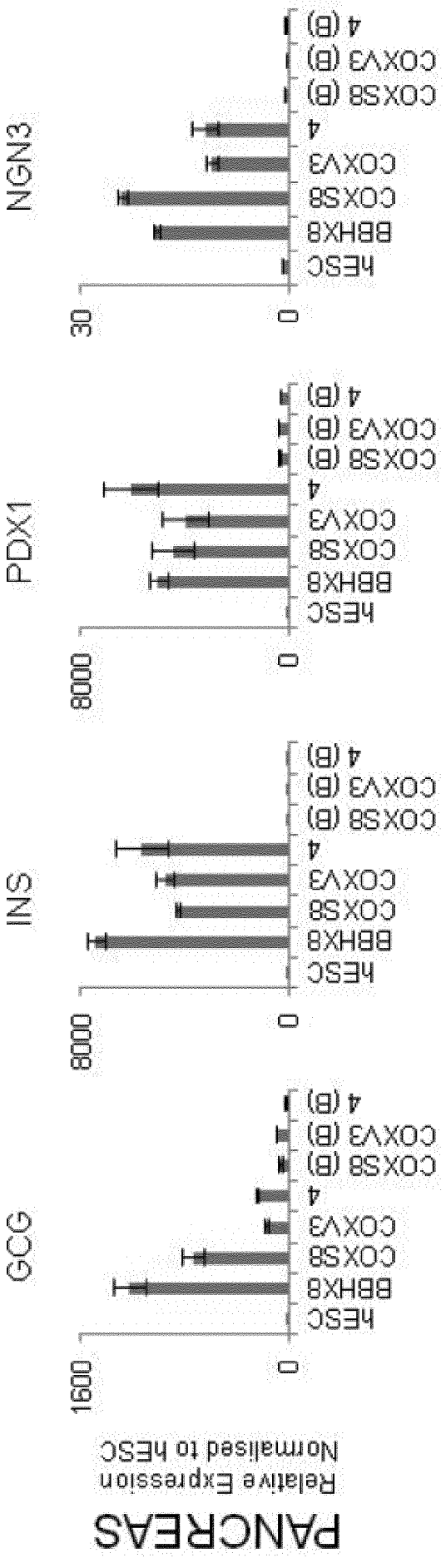

PANCREAS
Relative Expression
Normalised to hESC
GCG
INS
PDX1
NGN3
1600
8000
8000
30
0
hESC
BBHX8
COXS8
COXV3
4
COXS8 (B)
COXV3 (B)
4 (B)

Figure 3C

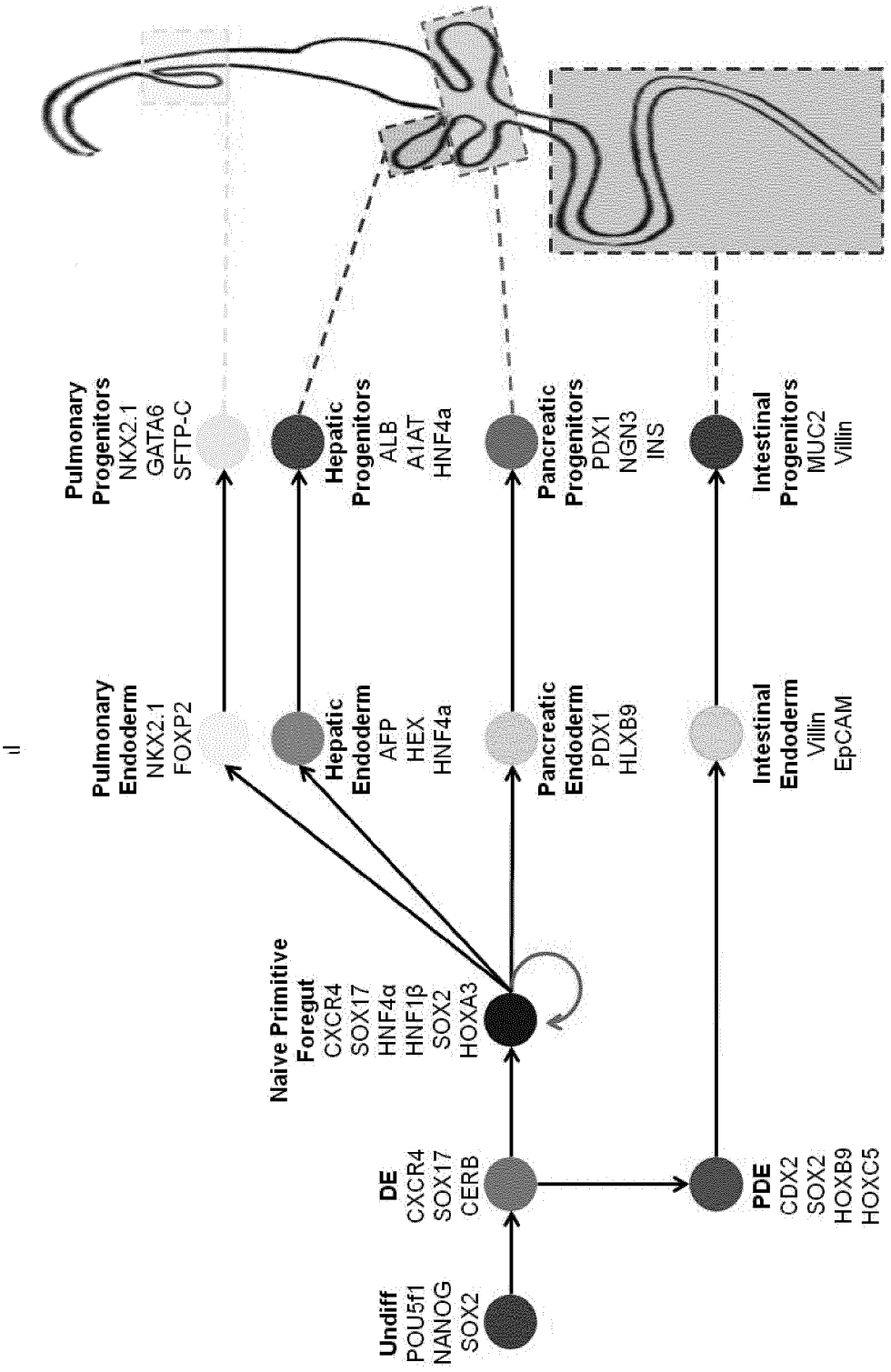

Undiff
POU5f1
NANOG
SOX2
DE
CXCR4
SOX17
CERB
Naive Primitive Foregut
CXCR4
SOX17
HNF4α
HNF1β
SOX2
HOXA3
PDE
CDX2
SOX2
HOXB9
HOXC5
Pulmonary Endoderm
NKX2.1
FOXP2
Hepatic Endoderm
AFP
HEX
HNF4a
Pancreatic Endoderm
PDX1
HLXB9
Intestinal Endoderm
Villin
EpCAM
Pulmonary Progenitors
NKX2.1
GATA6
SFTP-C
Hepatic Progenitors
ALB
A1AT
HNF4a
Pancreatic Progenitors
PDX1
NGN3
INS
Intestinal Progenitors
MUC2
Villin

Figure 4