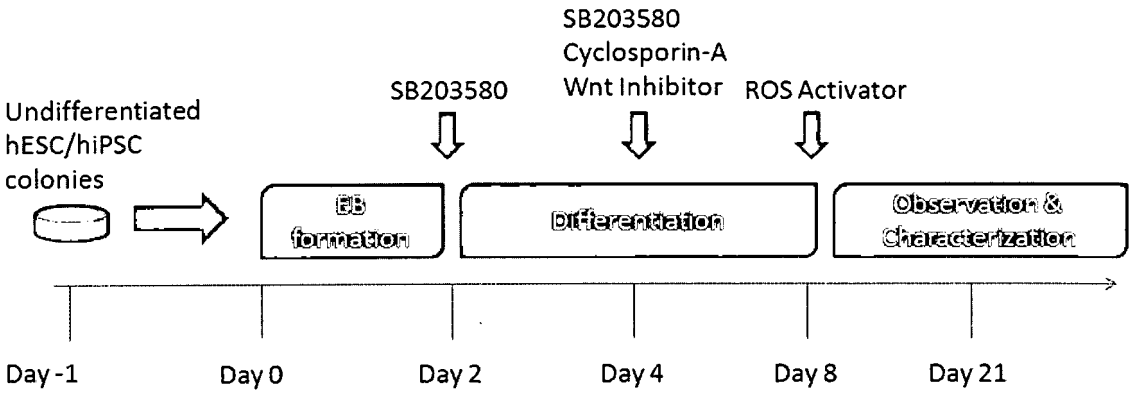


Figure 1

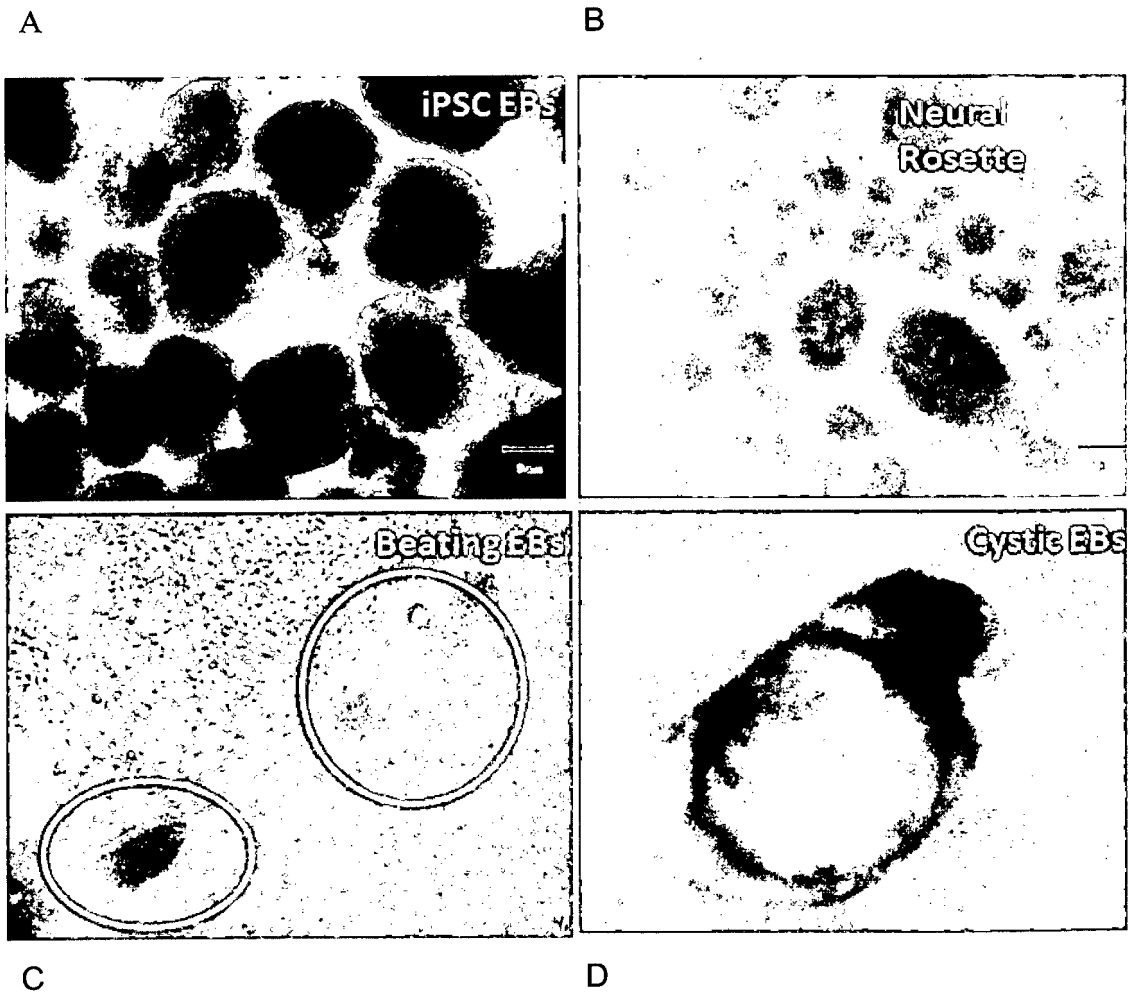


Figure 2

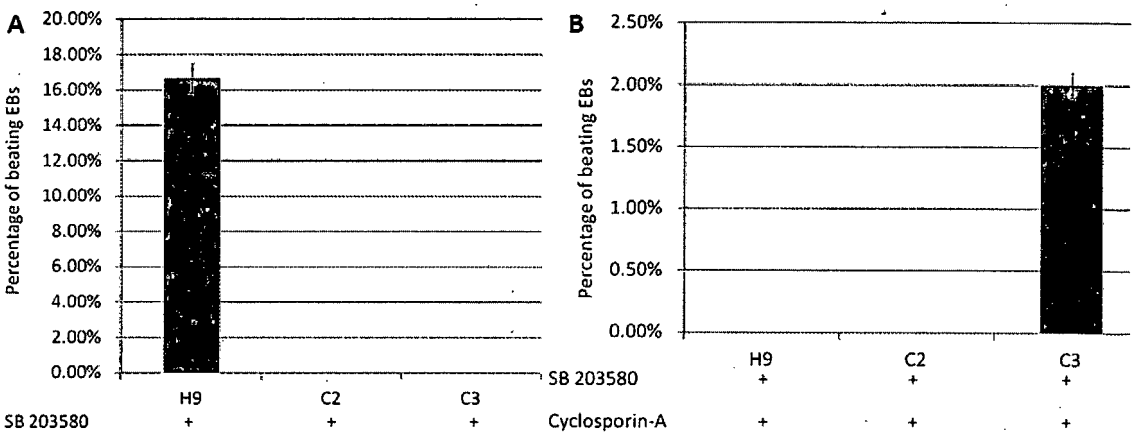


Figure 3

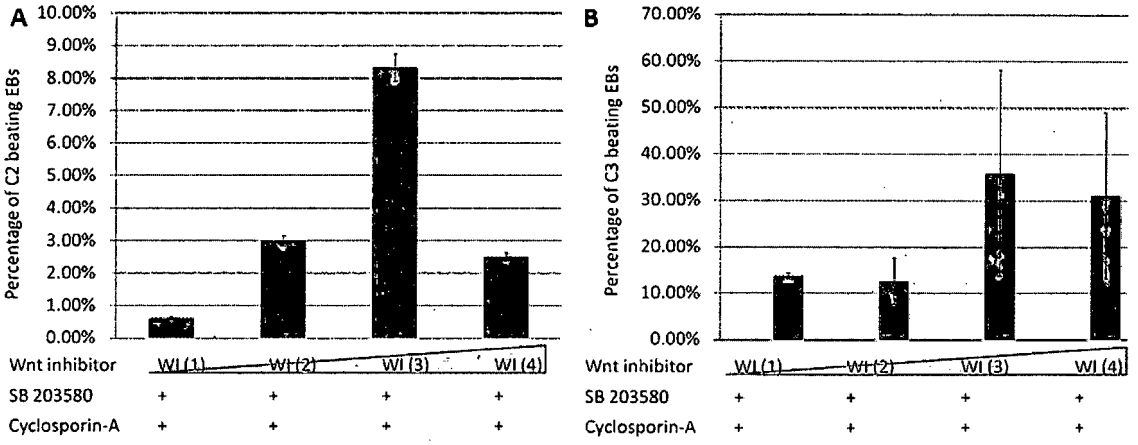


Figure 4

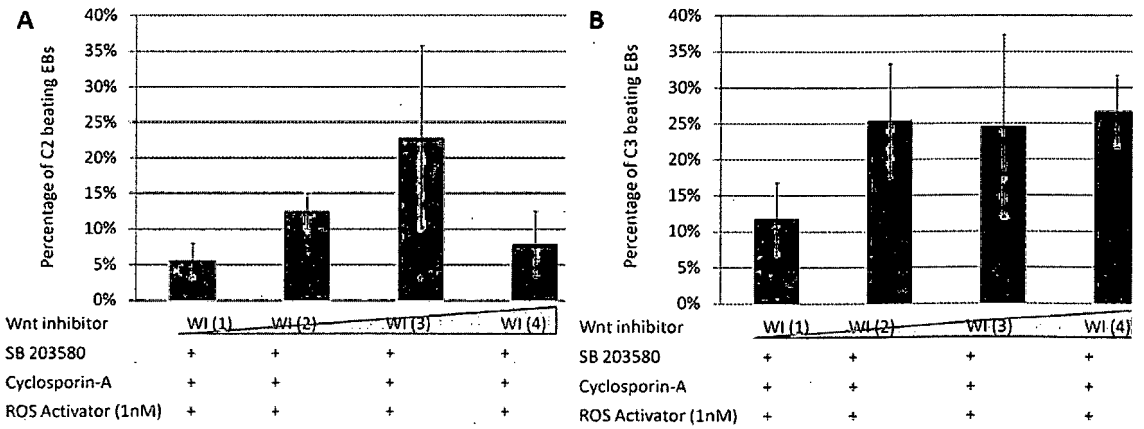


Figure 5

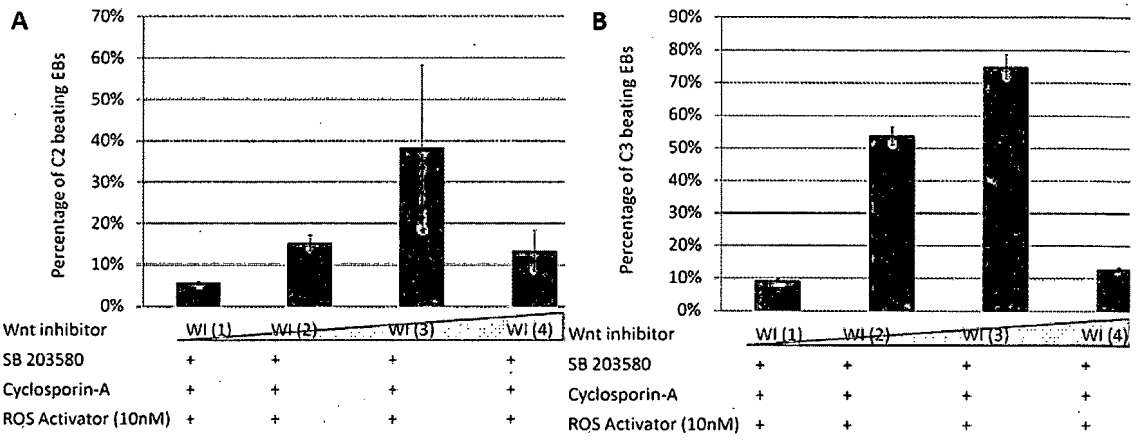


Figure 6

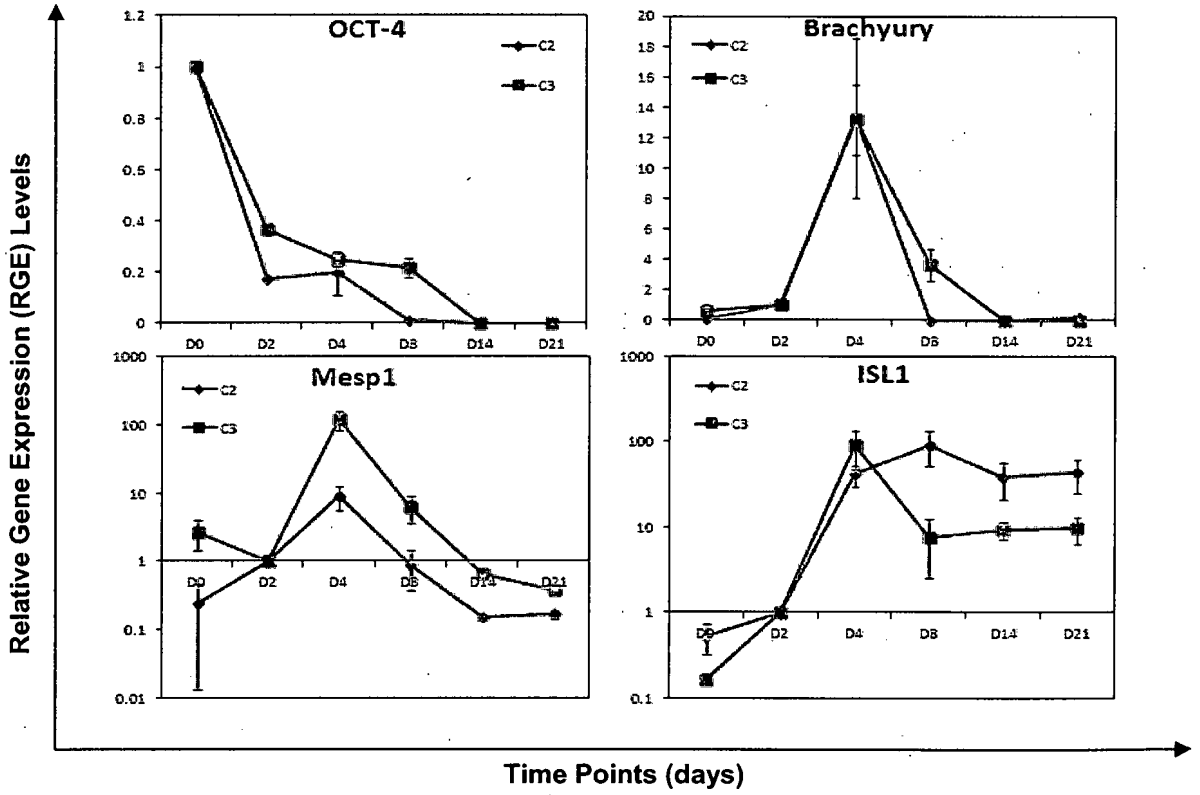


Figure 7

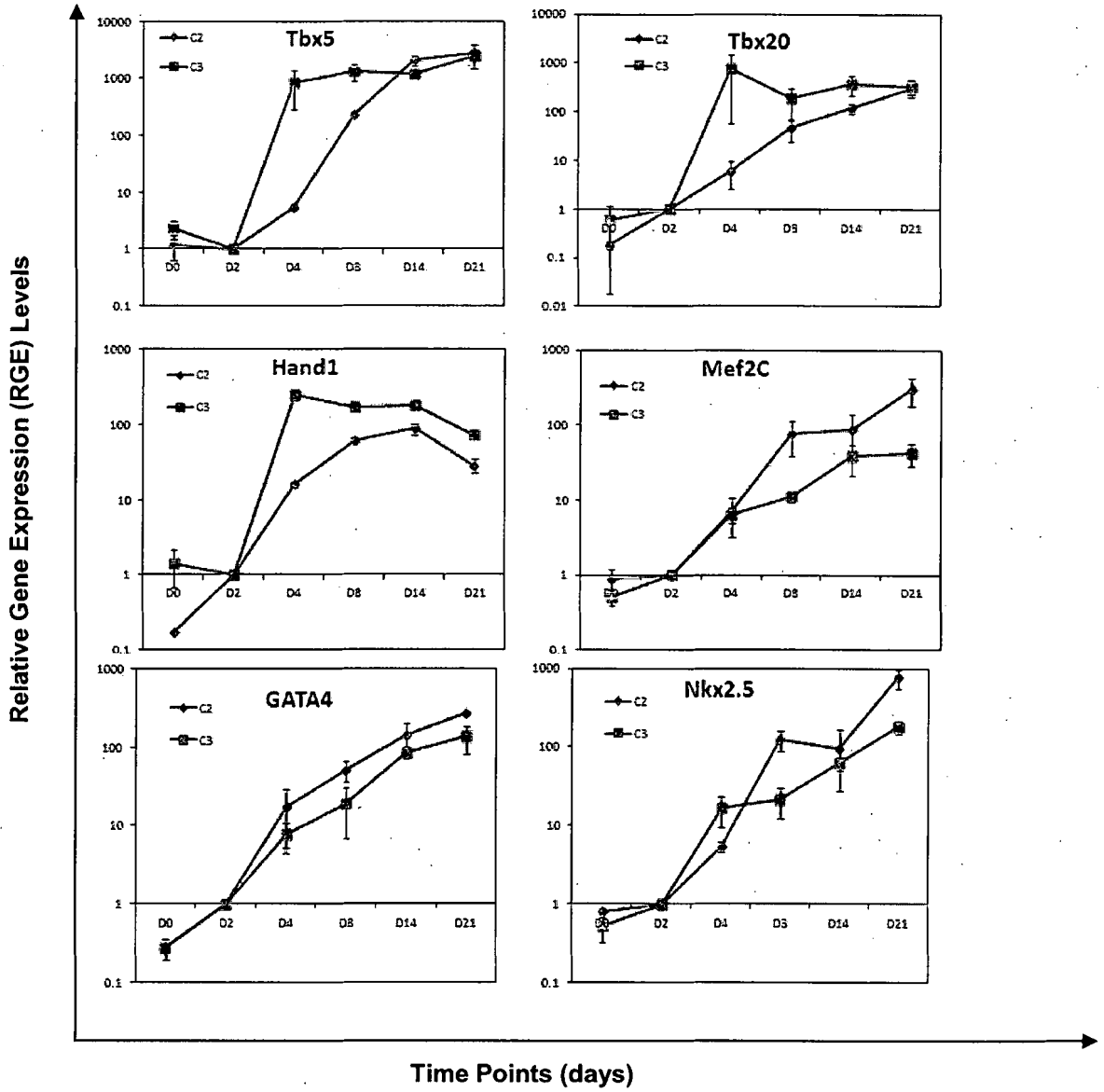


Figure 8

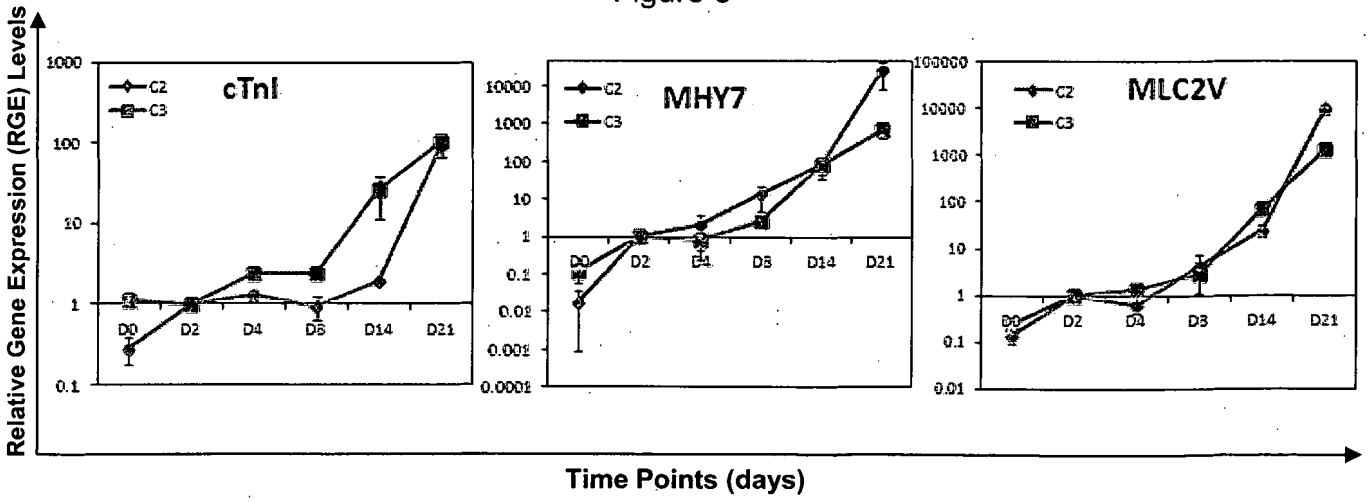


Figure 9

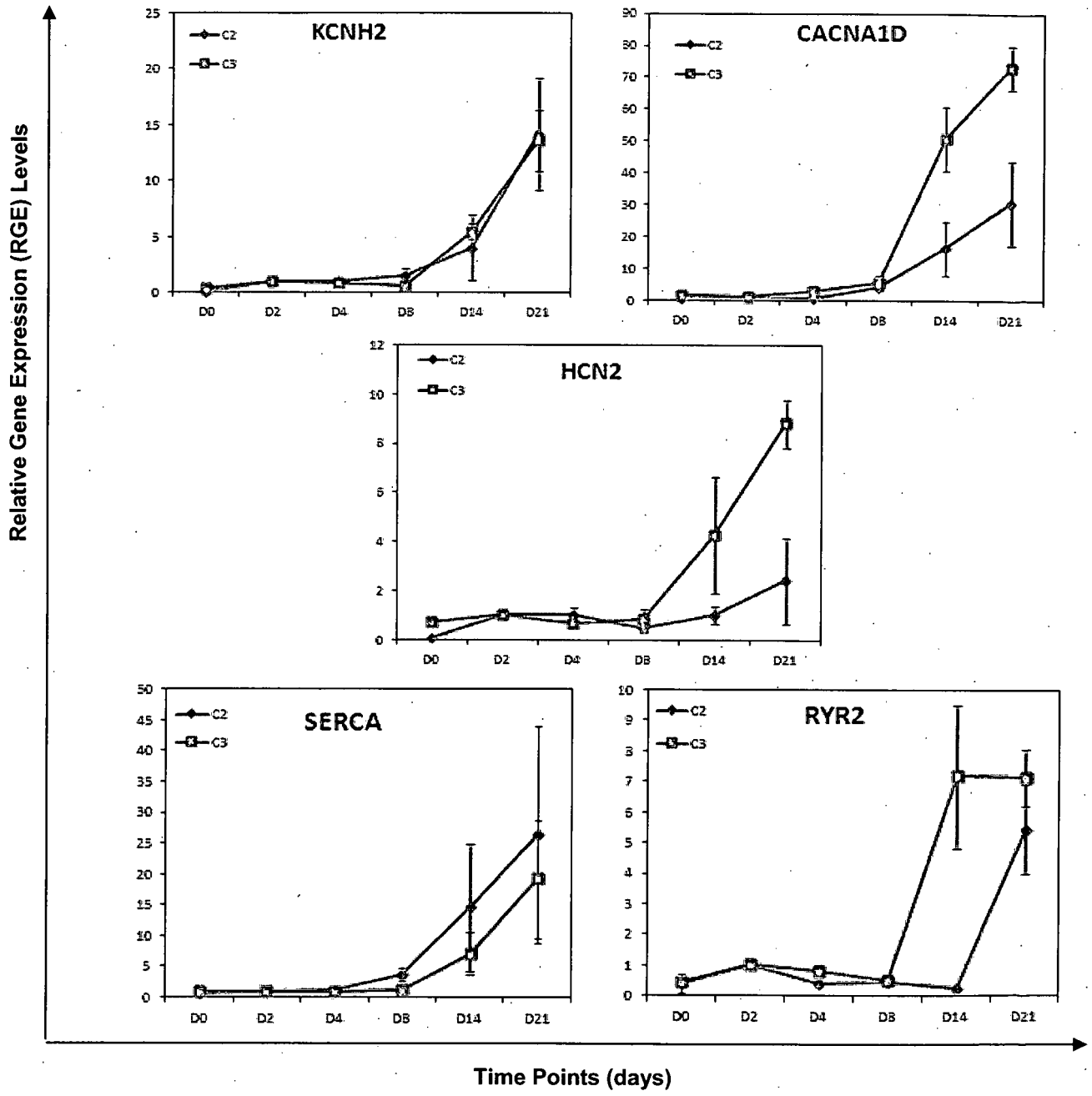

KCNH2
CACNA1D
HCN2
SERCA
RYR2
C2
C3
D0
D2
D4
D8
D14
D21
Relative Gene Expression (RGE) Levels
Time Points (days)

Figure 10

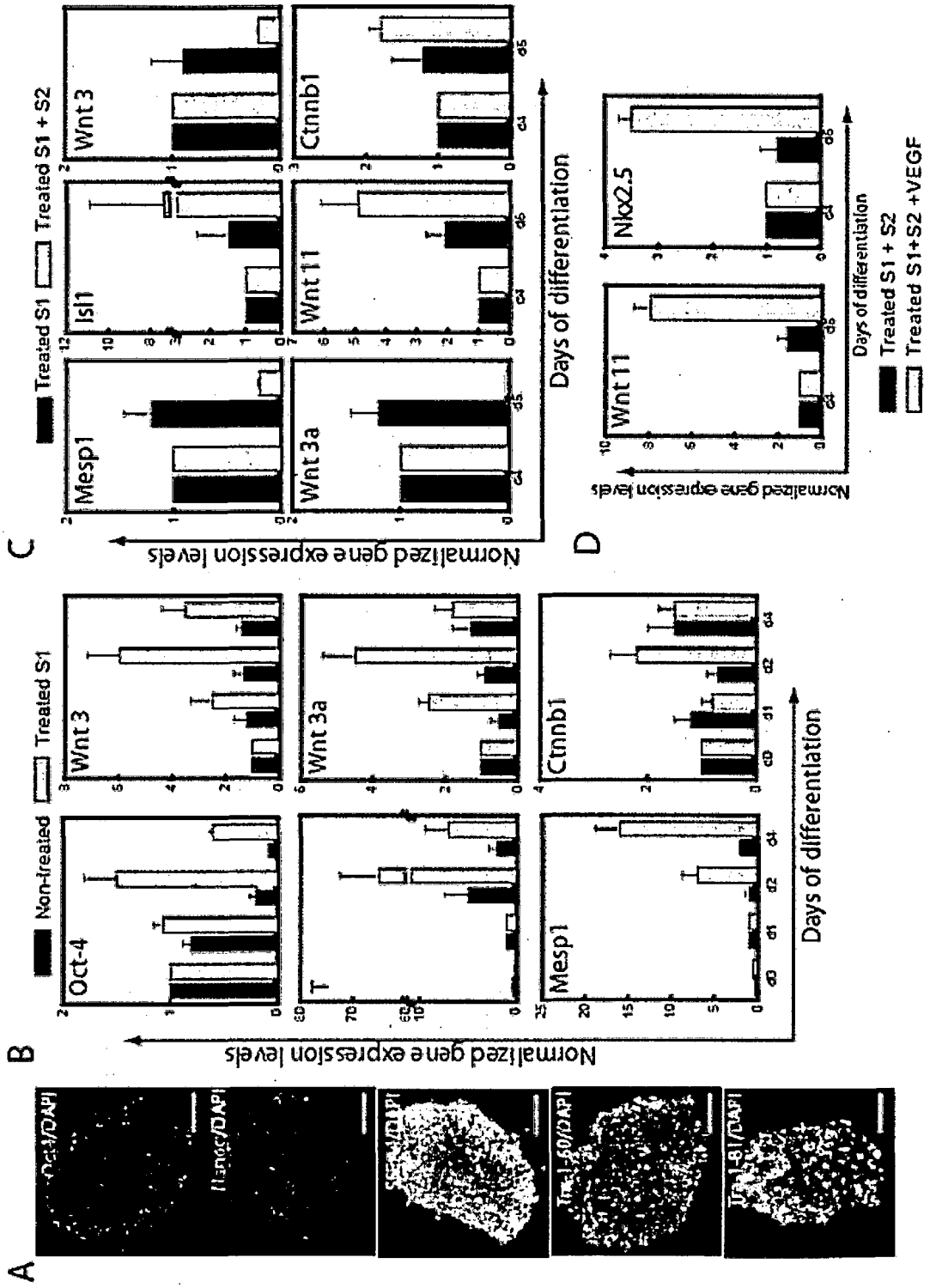

A
B
C
D
Non-treated
Treated S1
Treated S1 + S2
Oct-4
T
Mesp1
Wnt 3
Wnt 3a
Isl1
Wnt 11
Ctnnb1
Nkx2.5
Normalized gene expression levels
Days of differentiation
Treated S1 + S2
Treated S1+S2 +VEGF

Figure 11

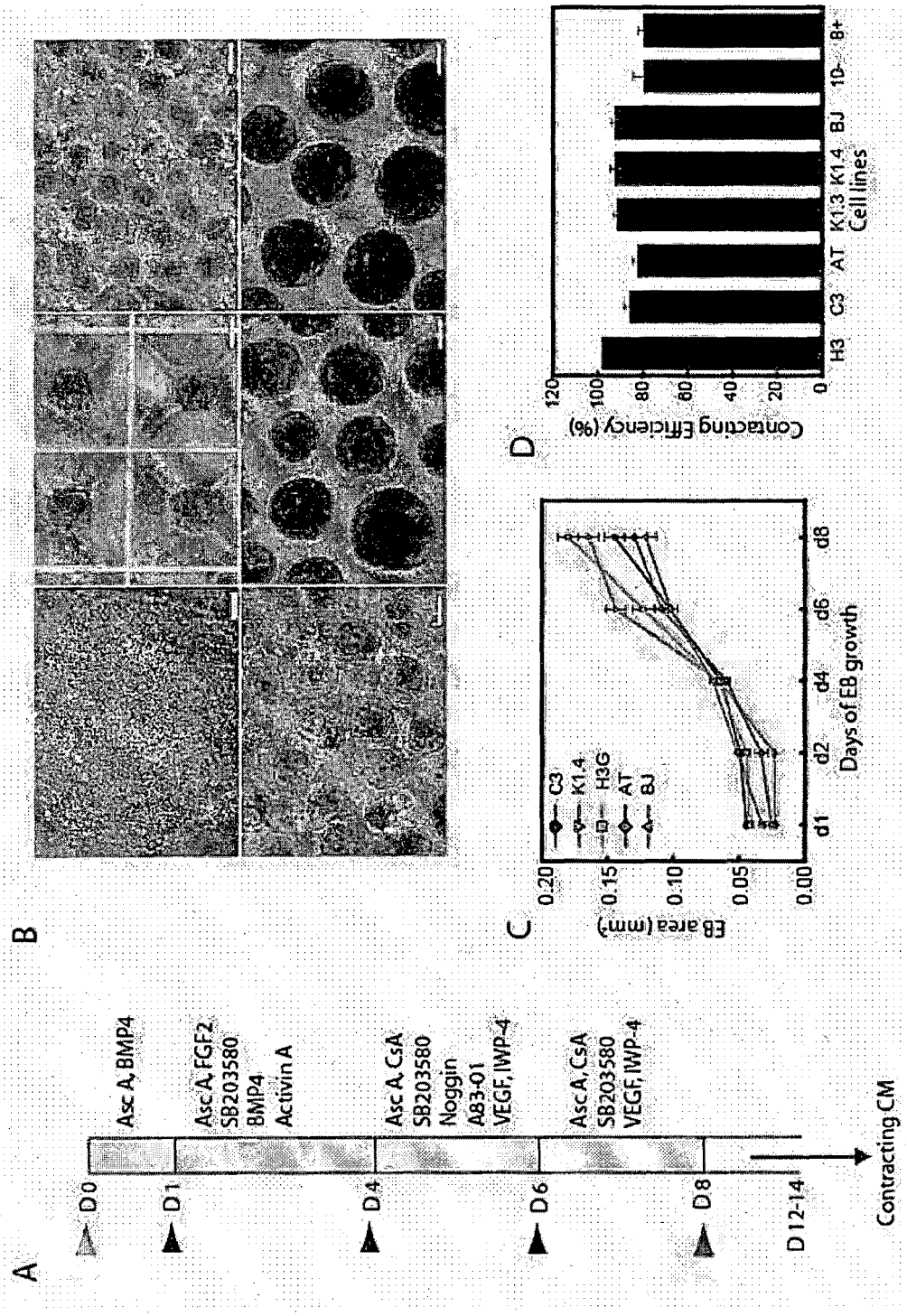

A
D0
D1
D4
D6
D8
D 12-14
Asc A, BMP4
Asc A, FGF2
SB203580
BMP4
Activin A
Asc A, CsA
SB203580
Noggin
A83-01
VEGF, IWP-4
Asc A, CsA
SB203580
VEGF, IWP-4
Contracting CM
B
C
EB area (mm²)
0.20
0.15
0.10
0.05
0.00
C3
K1.4
H3G
AT
BJ
d1
d2
d4
d6
d8
Days of EB growth
D
Contracting Efficiency (%)
120
100
80
60
40
20
0
H3
C3
AT
K1.3
K1.4
BJ
Cell lines

Figure 12

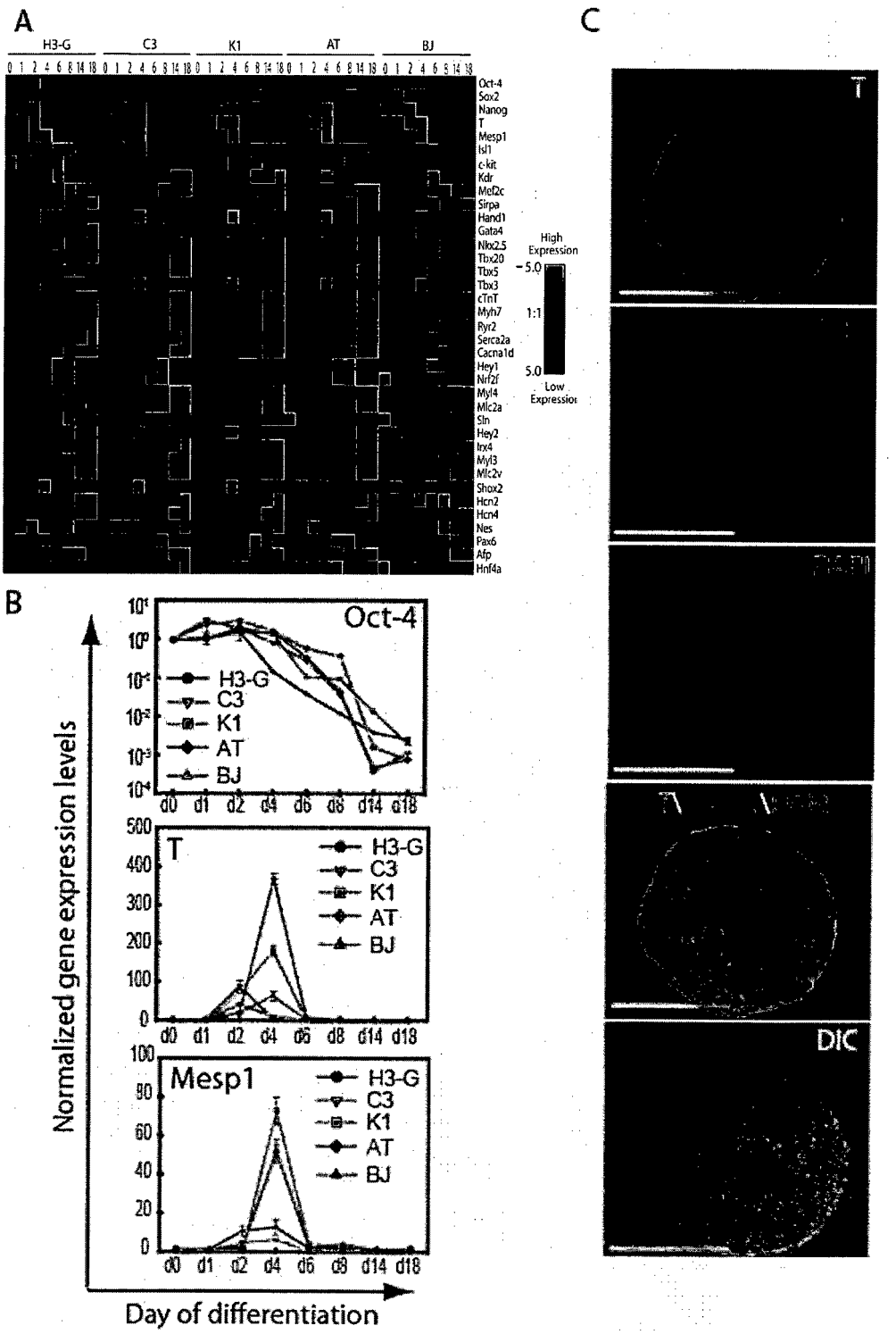

A
H3-G
C3
K1
AT
BJ
Oct-4
Sox2
Nanog
T
Mesp1
Isl1
c-kit
Kdr
Mef2c
Sirpa
Hand1
Gata4
Nkx2.5
Tbx20
Tbx5
Tbx3
cTnT
Myh7
Ryr2
Serca2a
Cacna1d
Hey1
Nrf2f
Myl4
Mlc2a
Sln
Hey2
Irx4
Myl3
Mlc2v
Shox2
Hcn2
Hcn4
Nes
Pax6
Afp
Hnf4a
High Expression
5.0
1:1
5.0
Low Expression
B
Oct-4
T
Mesp1
H3-G
C3
K1
AT
BJ
d0 d1 d2 d4 d6 d8 d14 d18
Normalized gene expression levels
Day of differentiation
C
T
DIC

Figure 13

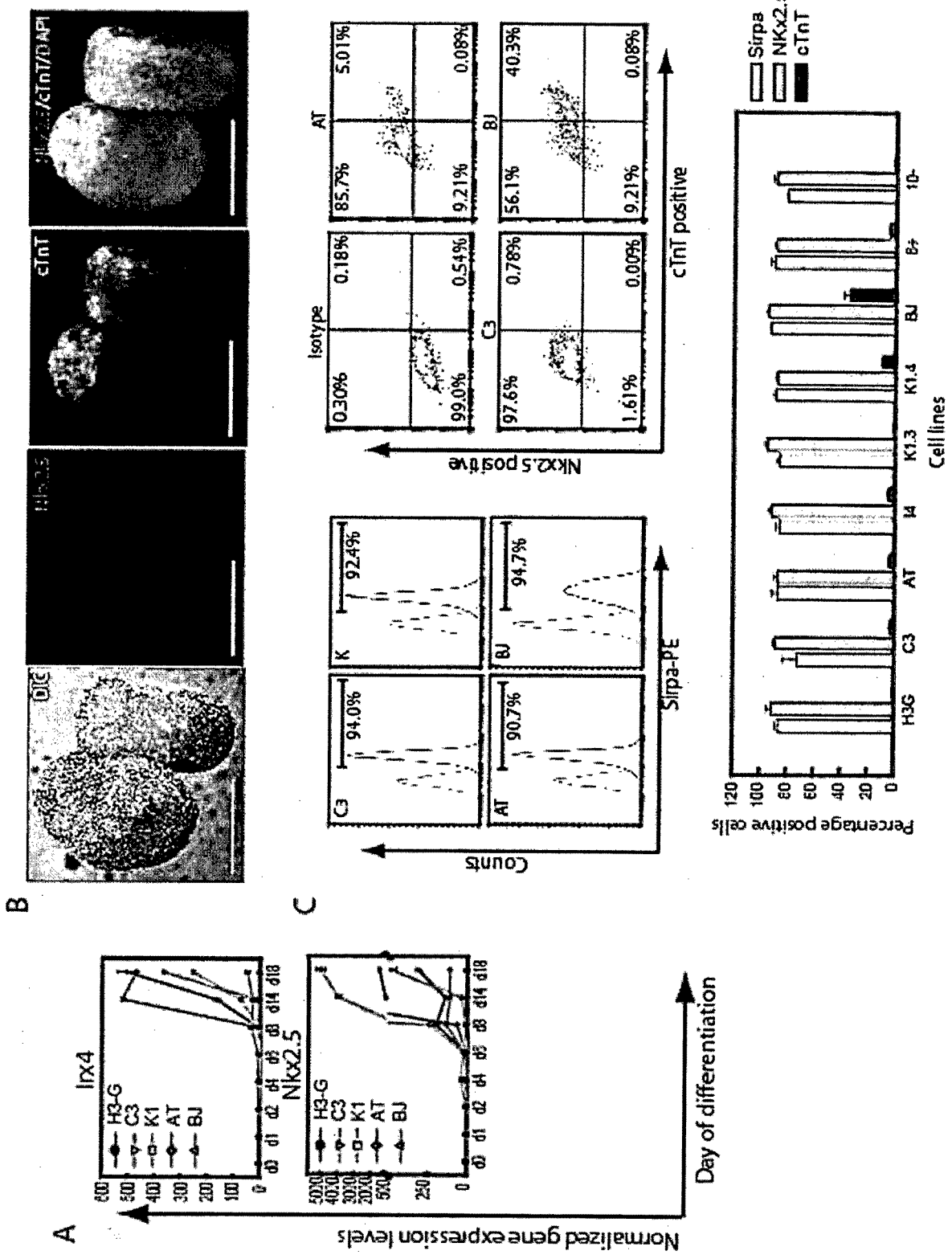

A
Normalized gene expression levels
Day of differentiation
Irx4
Nkx2.5
H3-G
C3
K1
AT
BJ
B
DIC
cTnT
C
Counts
Sirpa-PE
Nkx2.5 positive
cTnT positive
Isotype
C3
AT
BJ
K
0.30%
99.0%
0.18%
0.54%
97.6%
1.61%
0.78%
0.00%
85.7%
9.21%
5.01%
0.08%
56.1%
9.21%
40.3%
0.08%
94.0%
90.7%
92.4%
94.7%
Percentage positive cells
Sirpa
Nkx2.5
cTnT
H3G
C3
AT
K1.3
K1.4
BJ
Cell lines

Figure 14

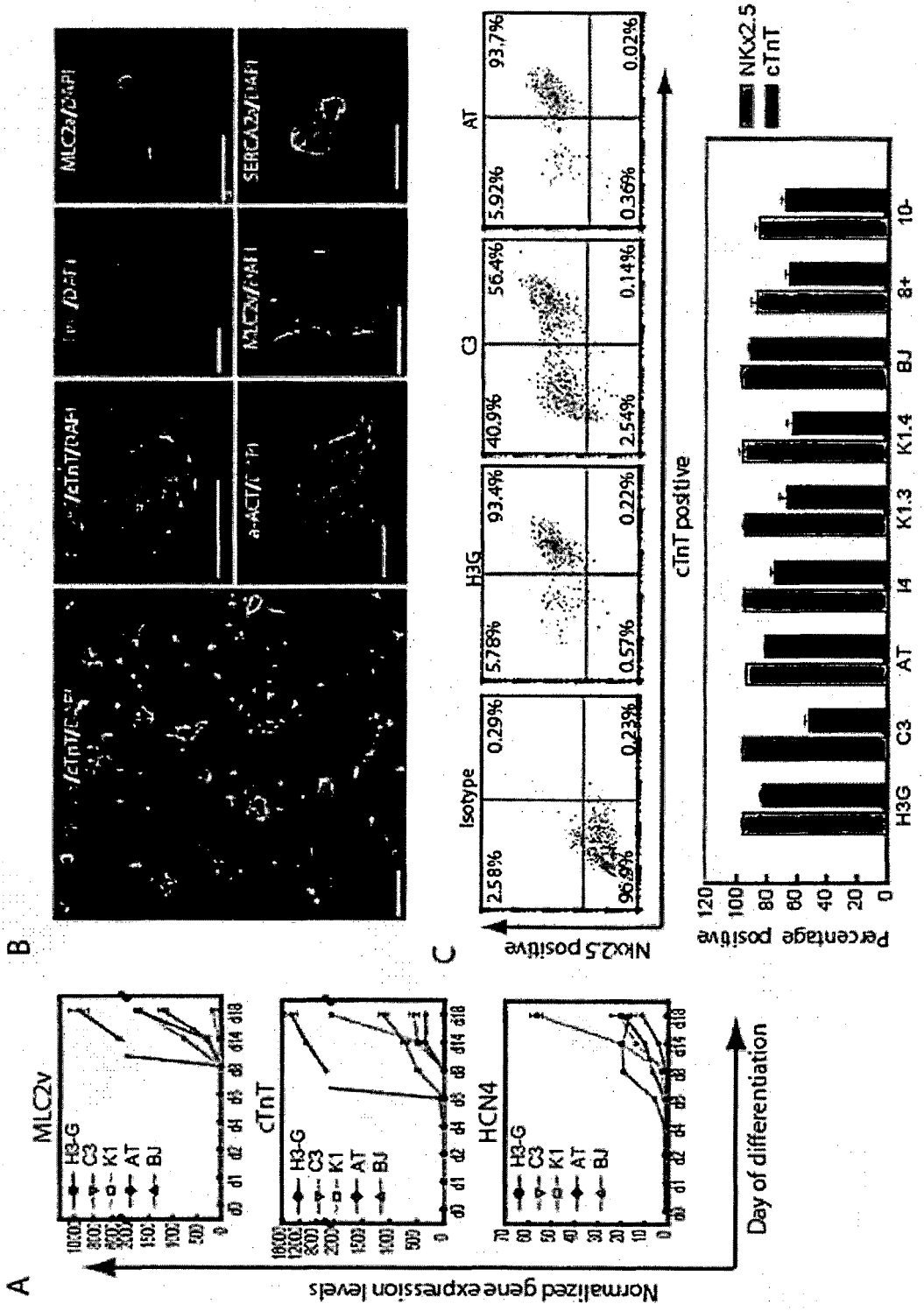

A
MLC2v
cTnT
HCN4
H3-G
C3
K1
AT
BJ
Normalized gene expression levels
Day of differentiation
B
C
Isotype
H3G
C3
AT
2.58%
0.29%
96.9%
0.23%
5.78%
93.4%
0.57%
0.22%
40.9%
56.4%
2.54%
0.14%
5.92%
93.7%
0.36%
0.02%
Nkx2.5 positive
cTnT positive
Percentage positive
NKx2.5
cTnT

Figure 15

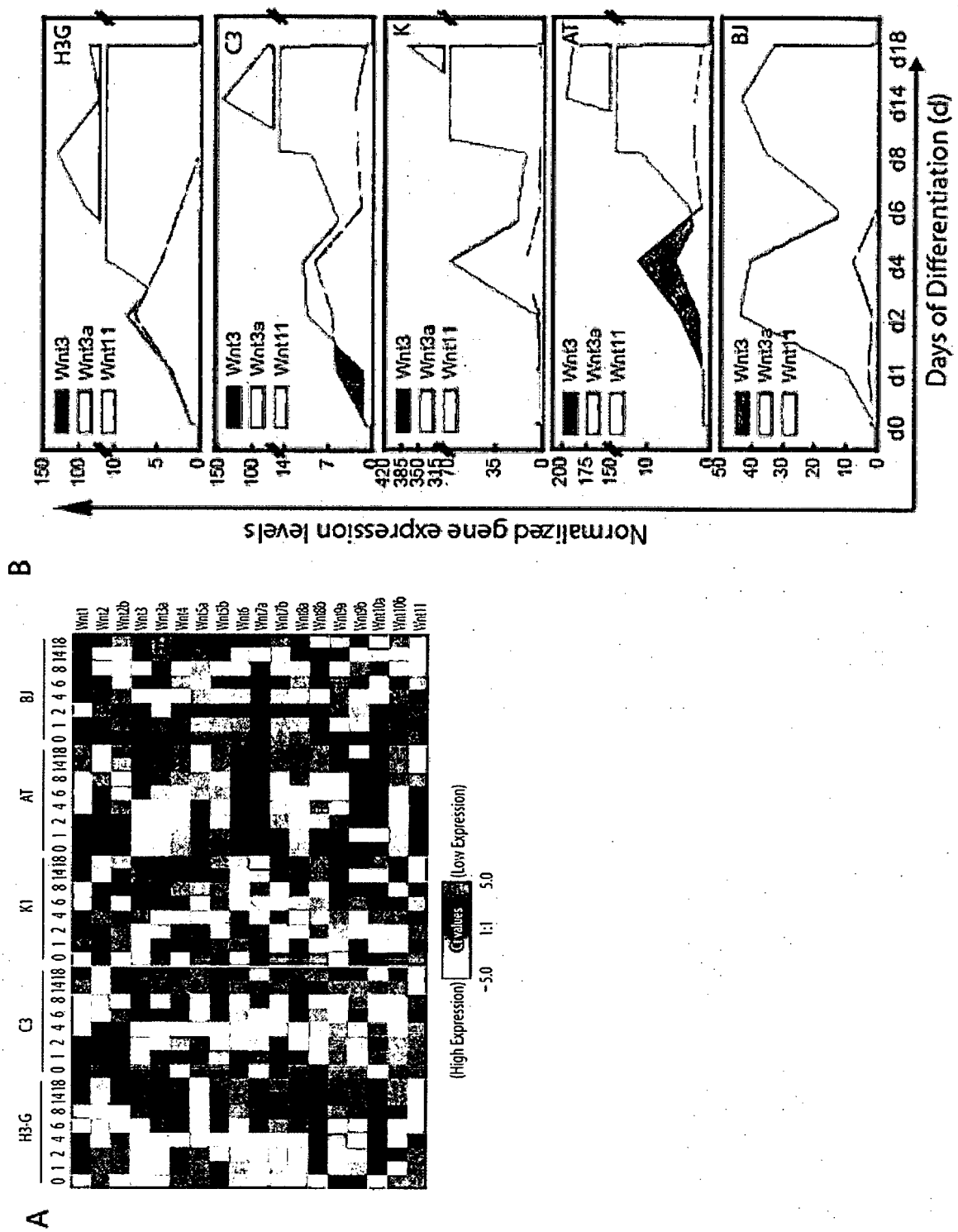

A
B
H3-G
C3
K1
AT
BJ
Wnt1
Wnt2
Wnt2b
Wnt3
Wnt3a
Wnt4
Wnt5a
Wnt5b
Wnt6
Wnt7a
Wnt7b
Wnt8a
Wnt8b
Wnt9a
Wnt9b
Wnt10a
Wnt10b
Wnt11
(High Expression)
(Low Expression)
-5.0
1:1
5.0
H3G
C3
K
AT
BJ
Wnt3
Wnt3a
Wnt11
Normalized gene expression levels
Days of Differentiation (d)
d0
d1
d2
d4
d6
d8
d14
d18

Figure 16