Figure 1

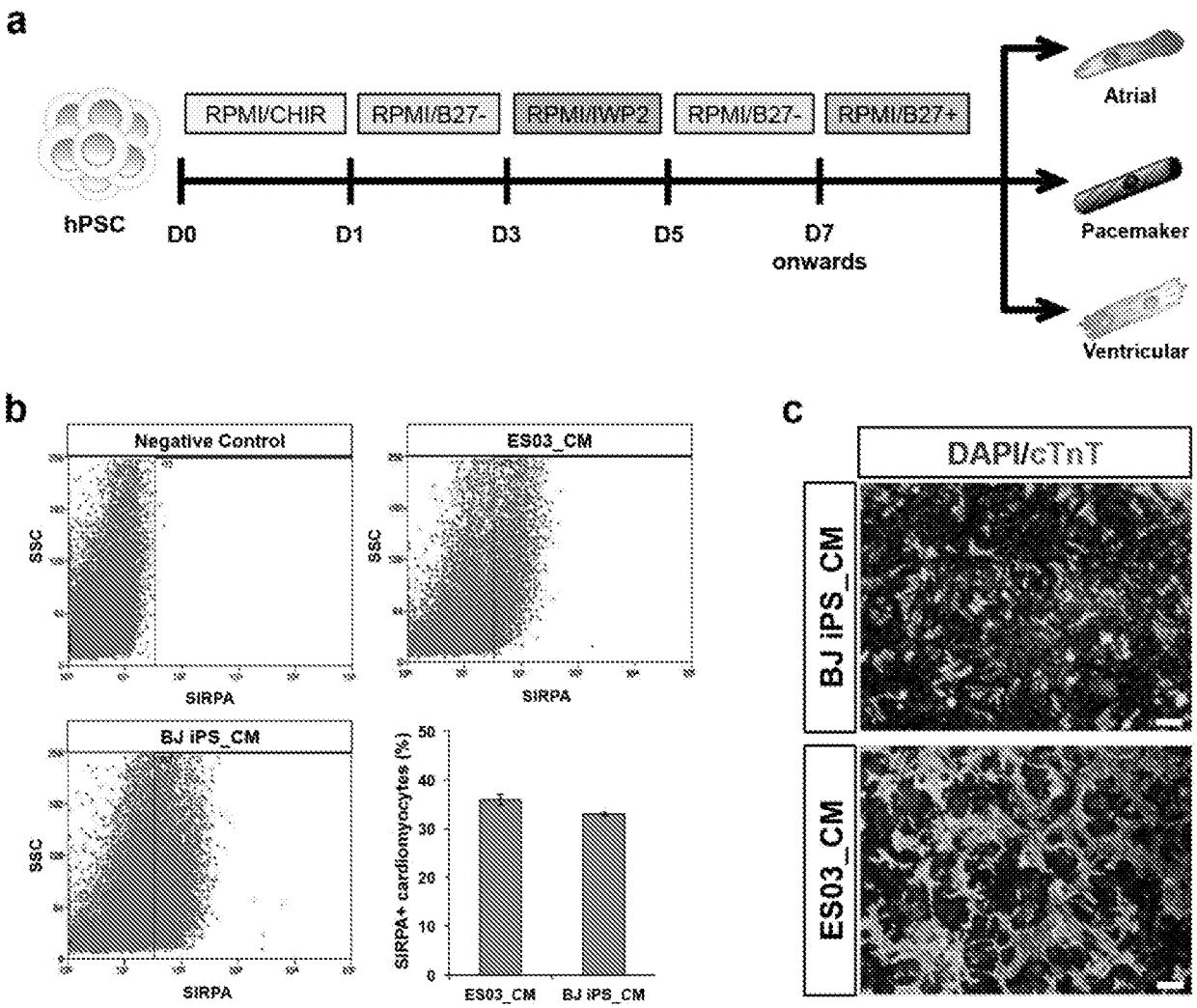

a
RPMI/CHIR
RPMI/B27-
RPMI/IWP2
RPMI/B27-
RPMI/B27+
hPSC
D0
D1
D3
D5
D7 onwards
Atrial
Pacemaker
Ventricular
b
Negative Control
ES03_CM
BJ iPS_CM
SSC
SIRPA
SIRPA+ cardiomyocytes (%)
ES03_CM
BJ iPS_CM
c
DAPI/cTnT
BJ iPS_CM
ES03_CM

Figure 2

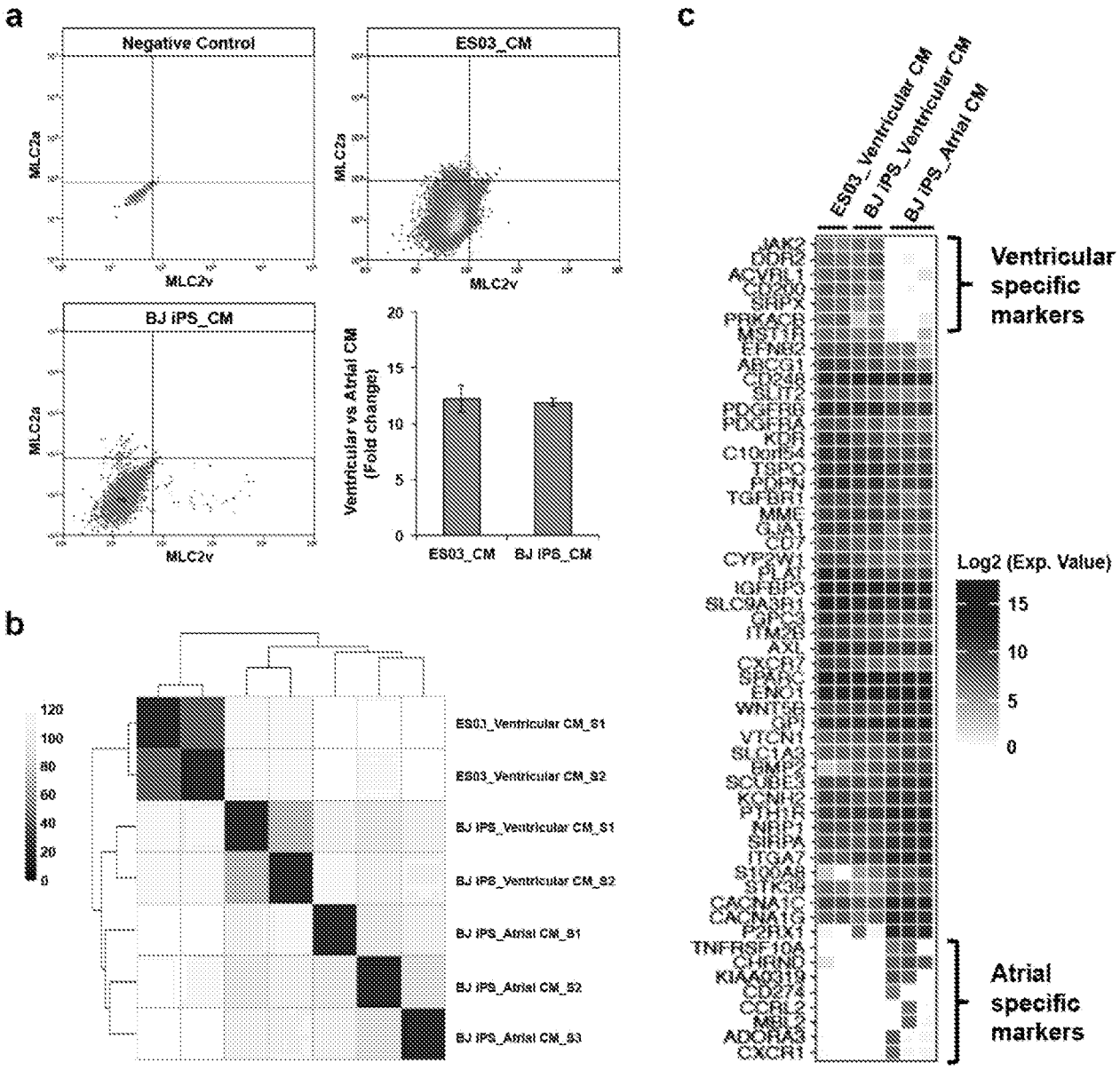

a
Negative Control
ES03_CM
BJ iPS_CM
MLC2a
MLC2v
Ventricular vs Atrial CM (Fold change)
ES03_CM
BJ iPS_CM
b
ES03_Ventricular CM_S1
ES03_Ventricular CM_S2
BJ iPS_Ventricular CM_S1
BJ iPS_Ventricular CM_S2
BJ iPS_Atrial CM_S1
BJ iPS_Atrial CM_S2
BJ iPS_Atrial CM_S3
c
ES03_Ventricular CM
BJ iPS_Ventricular CM
BJ iPS_Atrial CM
Ventricular specific markers
Atrial specific markers
Log2 (Exp. Value)

Figure 3

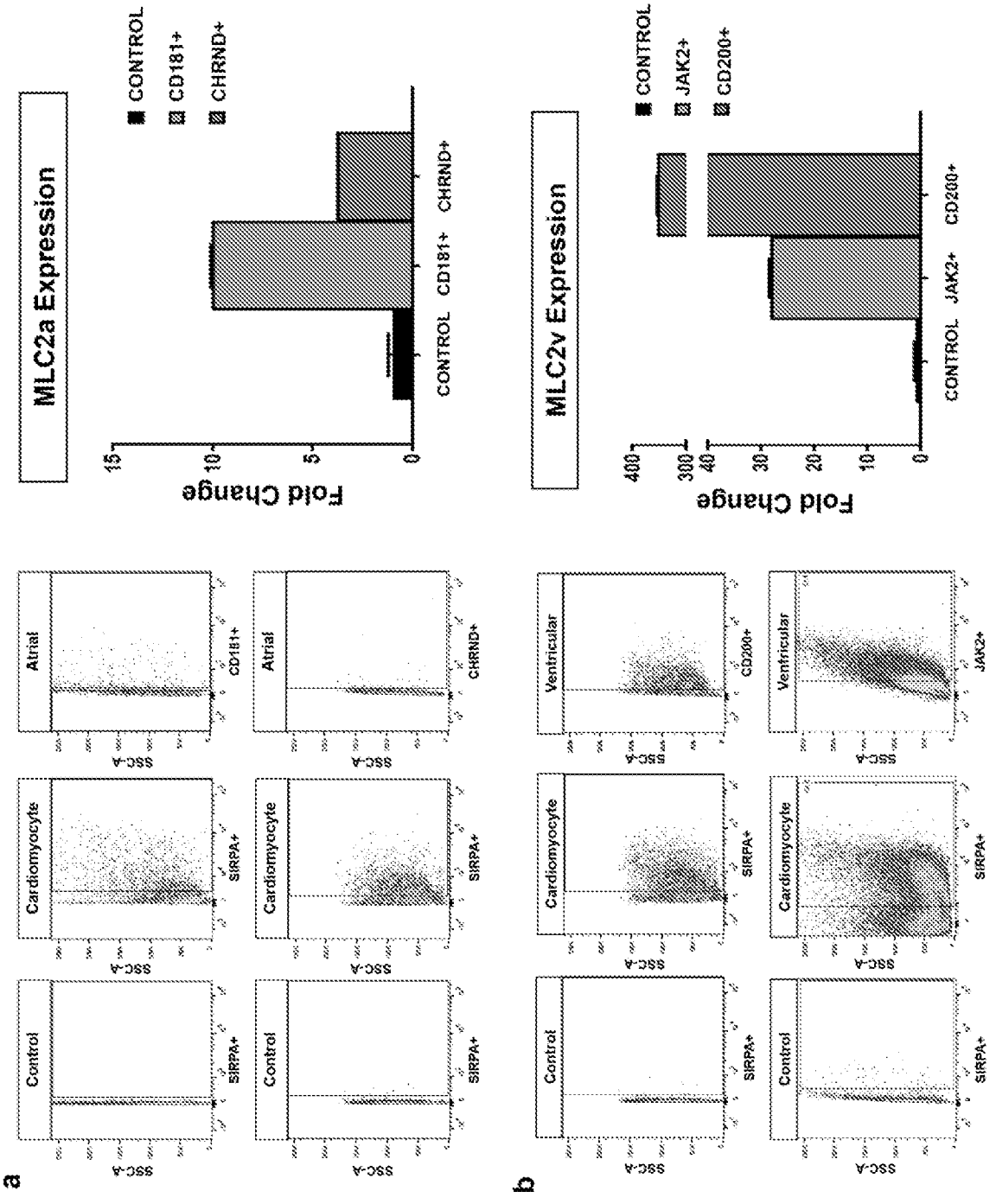
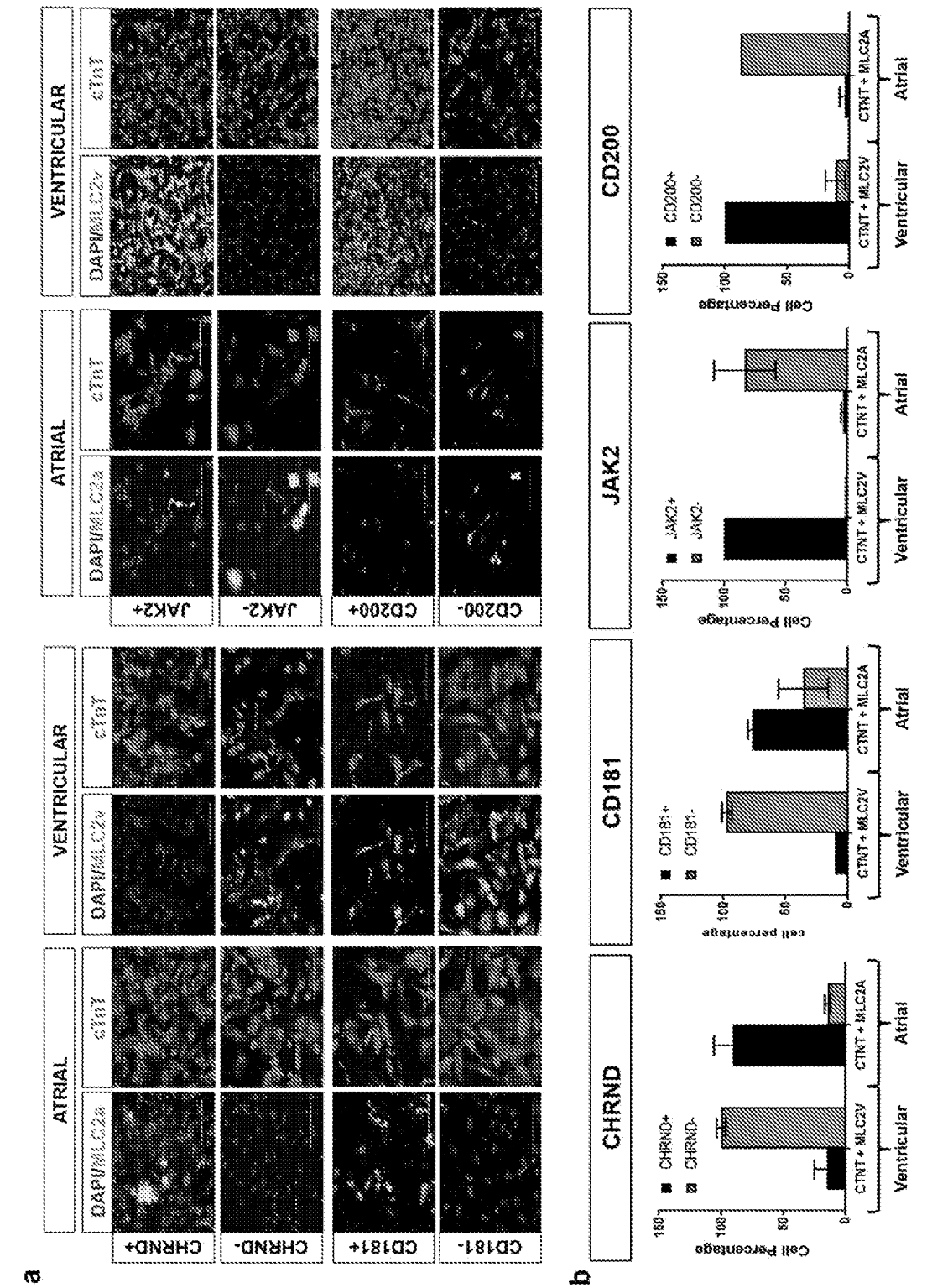

a
Control
Atrial
Cardiomyocyte
SSC-A
SIRPA+
CD181+
CHRND+
MLC2a Expression
CONTROL
CD181+
CHRND+
Fold Change
CONTROL CD181+ CHRND+
b
Ventricular
CD200+
JAK2+
MLC2v Expression
CONTROL
JAK2+
CD200+
CONTROL JAK2+ CD200+

Figure 4


a
ATRIAL
VENTRICULAR
ATRIAL
VENTRICULAR
DAPI/MLC2a
cTnT
DAPI/MLC2v
cTnT
CHRND+
CHRND-
CD181+
CD181-
JAK2+
JAK2-
CD200+
CD200-
b
CHRND
CD181
JAK2
CD200
Cell Percentage
CHRND+
CHRND-
CD181+
CD181-
JAK2+
JAK2-
CD200+
CD200-
CTNT + MLC2V
CTNT + MLC2A
Ventricular
Atrial