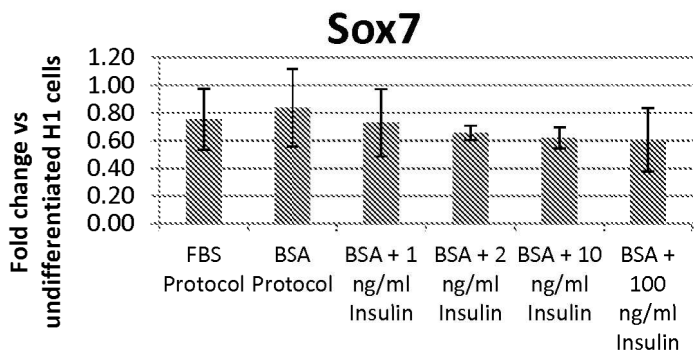
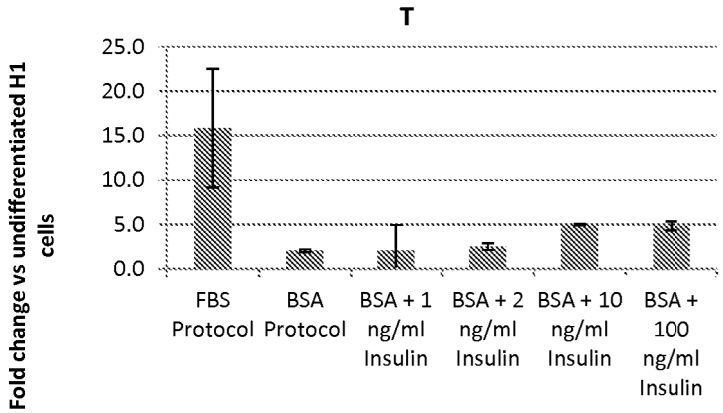
Figure 1

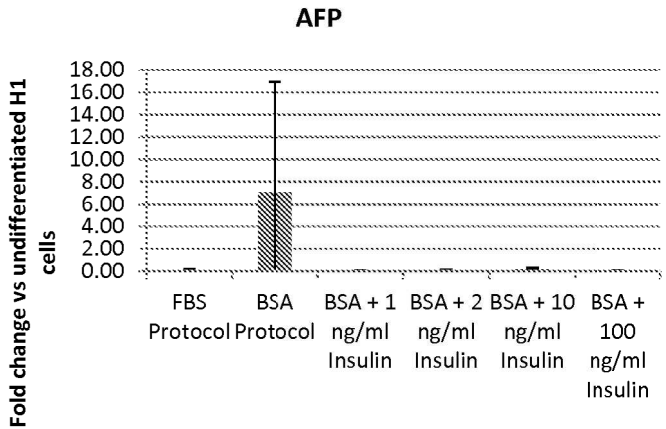
a)



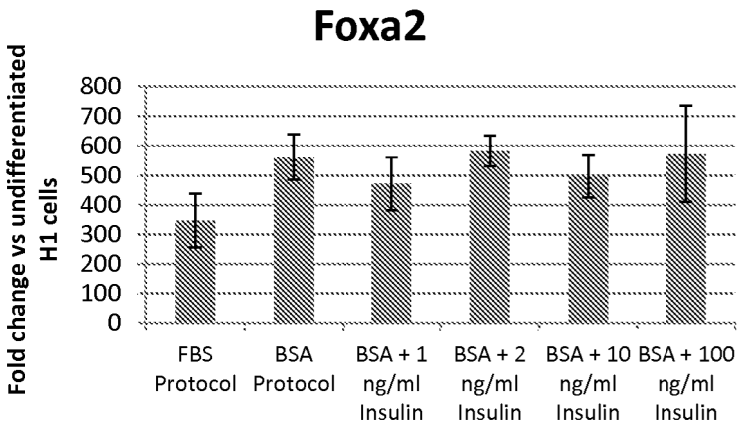
b)



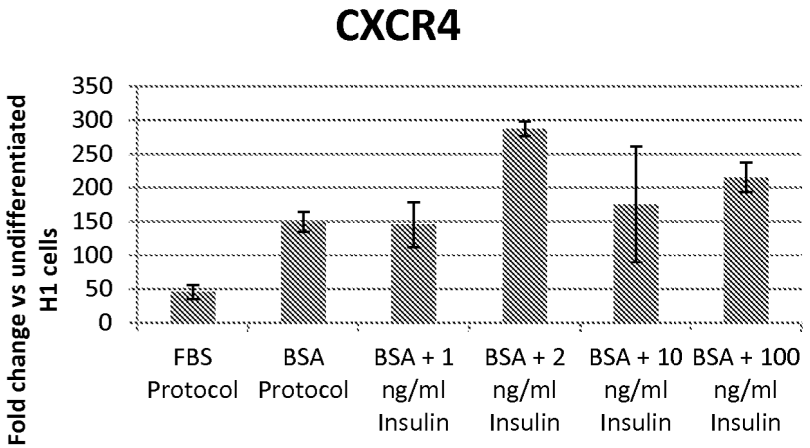
c)



d)



e)


CXCR4
Fold change vs undifferentiated H1 cells
350
300
250
200
150
100
50
0
FBS Protocol
BSA Protocol
BSA + 1 ng/ml Insulin
BSA + 2 ng/ml Insulin
BSA + 10 ng/ml Insulin
BSA + 100 ng/ml Insulin

f)

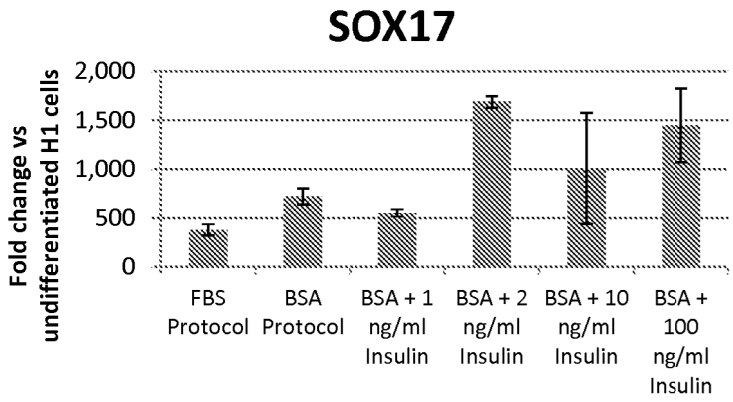

SOX17
Fold change vs undifferentiated H1 cells
2,000
1,500
1,000
500
0
FBS Protocol
BSA Protocol
BSA + 1 ng/ml Insulin
BSA + 2 ng/ml Insulin
BSA + 10 ng/ml Insulin
BSA + 100 ng/ml Insulin

Figure 2

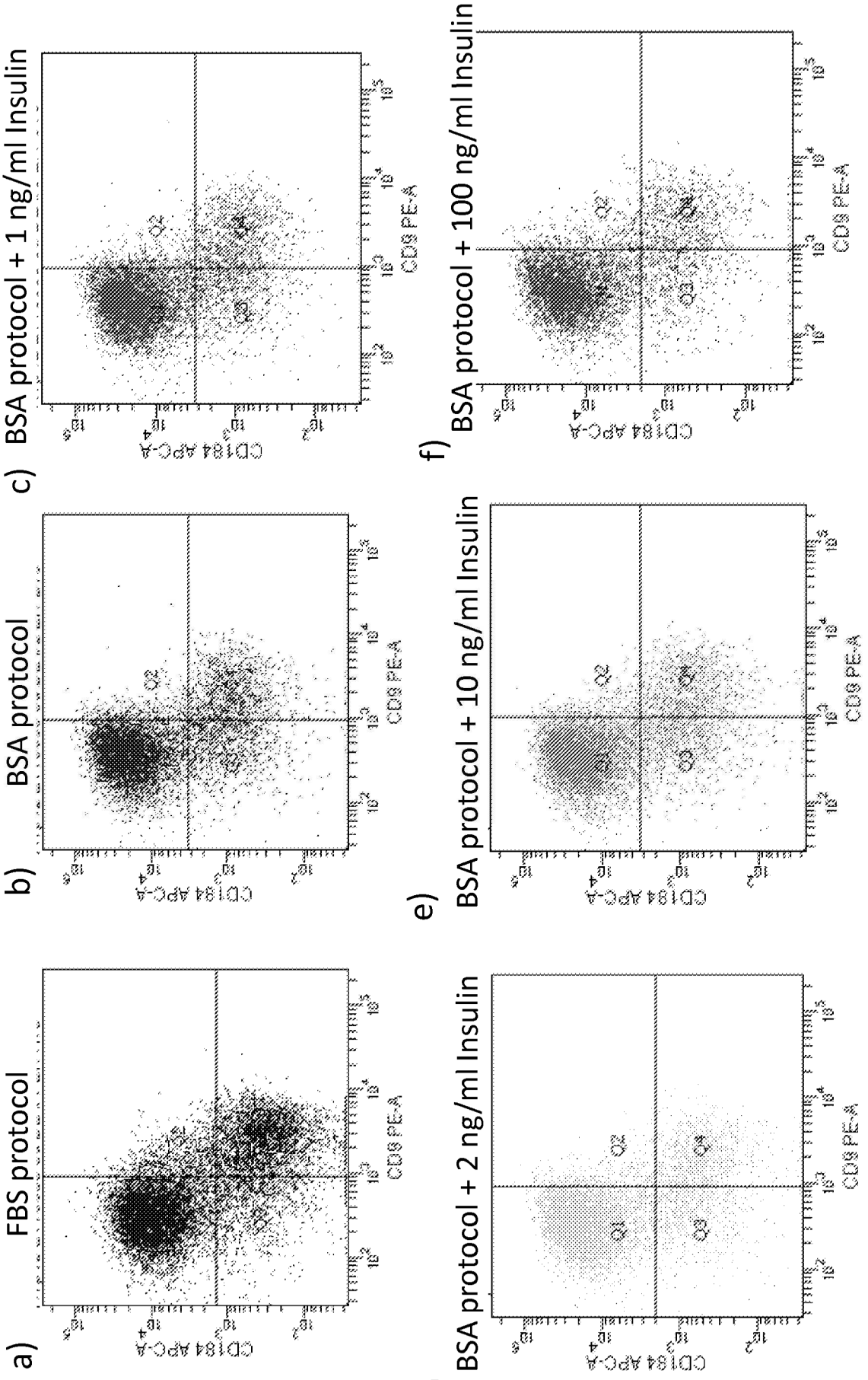
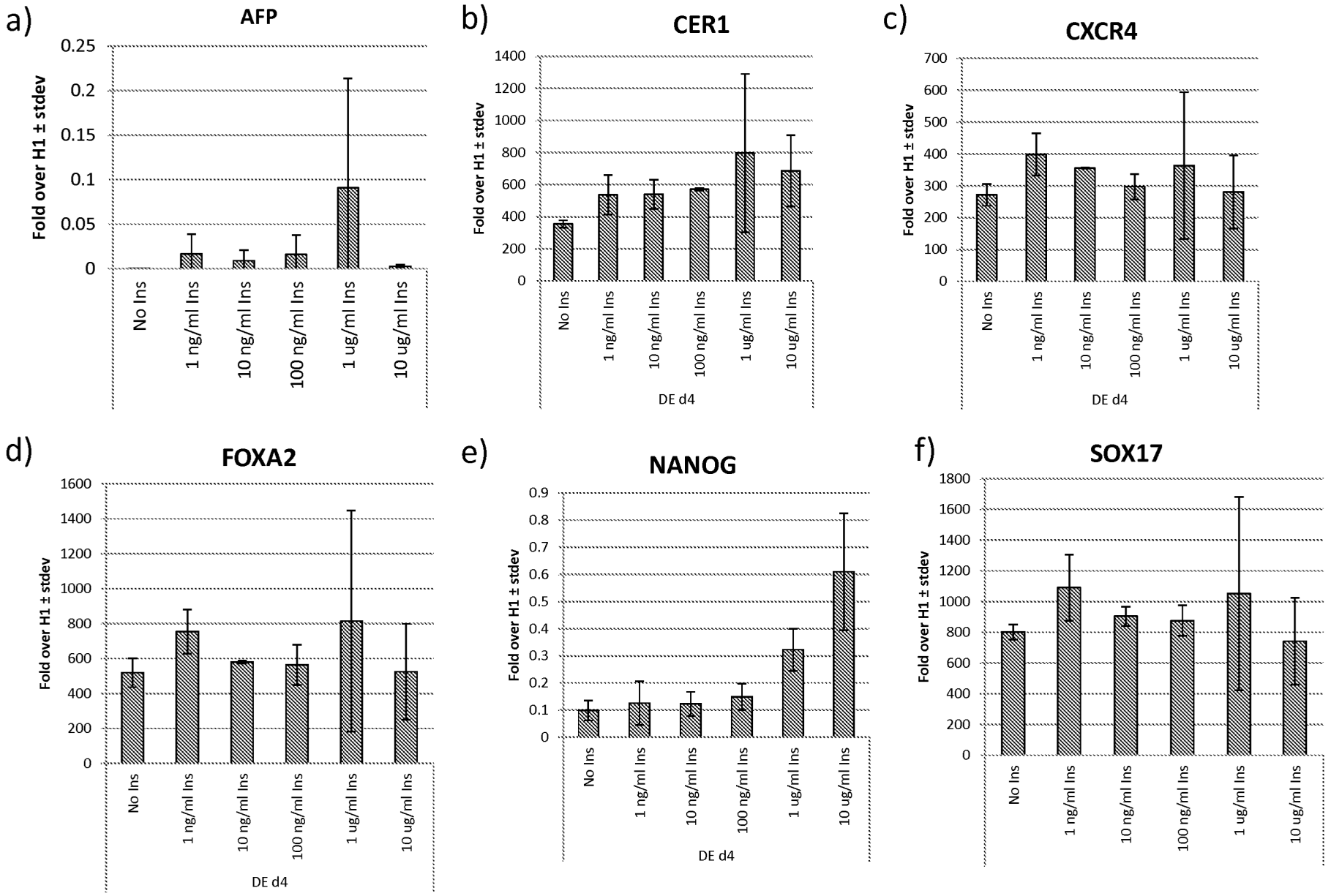

a)
FBS protocol
b)
BSA protocol
c)
BSA protocol + 1 ng/ml Insulin
d)
BSA protocol + 2 ng/ml Insulin
e)
BSA protocol + 10 ng/ml Insulin
f)
BSA protocol + 100 ng/ml Insulin
CD184 APC-A
CD9 PE-A

Figure 3

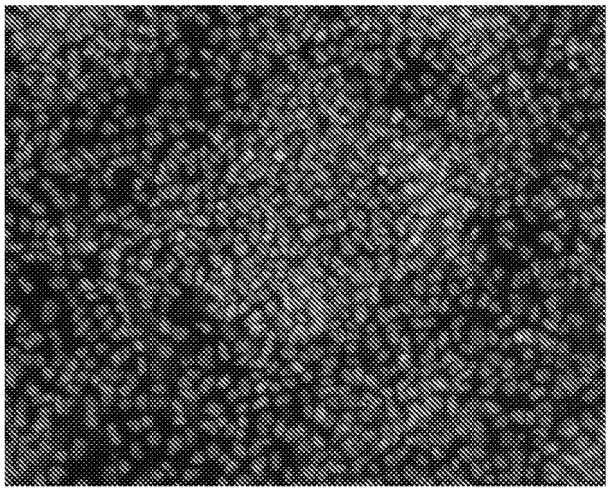

a)
AFP
Fold over H1 ± stdev
0.25
0.2
0.15
0.1
0.05
0
No Ins
1 ng/ml Ins
10 ng/ml Ins
100 ng/ml Ins
1 ug/ml Ins
10 ug/ml Ins
b)
CER1
Fold over H1 ± stdev
1400
1200
1000
800
600
400
200
0
No Ins
1 ng/ml Ins
10 ng/ml Ins
100 ng/ml Ins
1 ug/ml Ins
10 ug/ml Ins
DE d4
c)
CXCR4
Fold over H1 ± stdev
700
600
500
400
300
200
100
0
No Ins
1 ng/ml Ins
10 ng/ml Ins
100 ng/ml Ins
1 ug/ml Ins
10 ug/ml Ins
DE d4
d)
FOXA2
Fold over H1 ± stdev
1600
1400
1200
1000
800
600
400
200
0
No Ins
1 ng/ml Ins
10 ng/ml Ins
100 ng/ml Ins
1 ug/ml Ins
10 ug/ml Ins
DE d4
e)
NANOG
Fold over H1 ± stdev
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
No Ins
1 ng/ml Ins
10 ng/ml Ins
100 ng/ml Ins
1 ug/ml Ins
10 ug/ml Ins
DE d4
f)
SOX17
Fold over H1 ± stdev
1800
1600
1400
1200
1000
800
600
400
200
0
No Ins
1 ng/ml Ins
10 ng/ml Ins
100 ng/ml Ins
1 ug/ml Ins
10 ug/ml Ins

g)

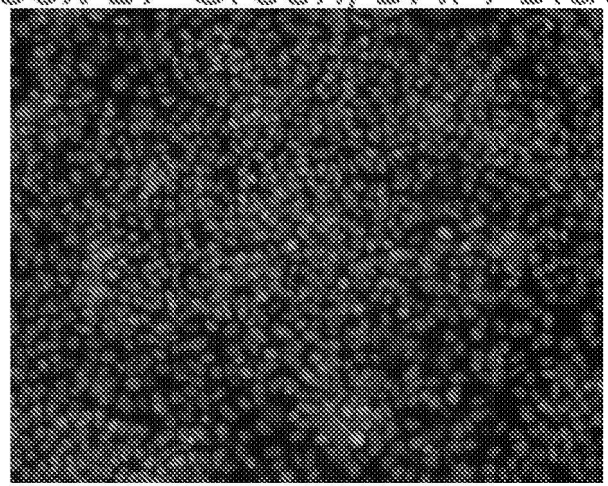
SOX7
Fold over H1 ± stdev
3
2.5
2
1.5
1
0.5
0
No Ins
1 ng/ml Ins
10 ng/ml Ins
100 ng/ml Ins
1 ug/ml Ins
10 ug/ml Ins
DE d4

Figure 4

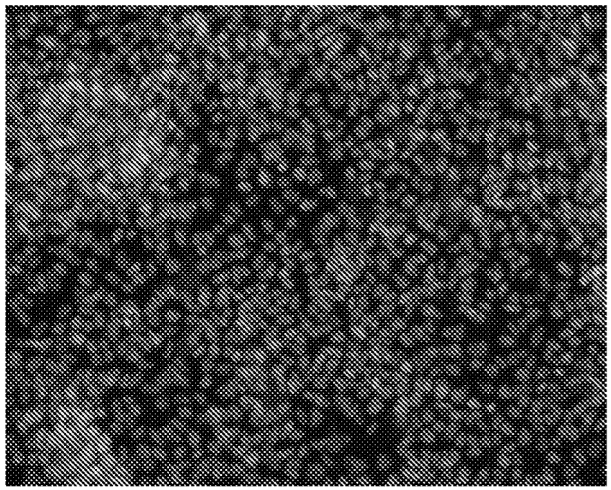
Sox 17-Green/DAPI-Blue



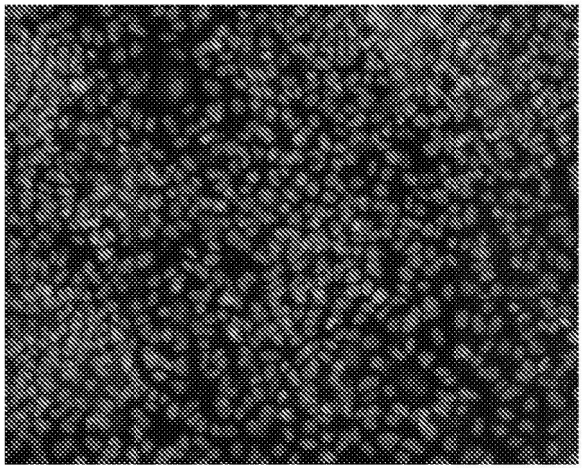
No Insulin



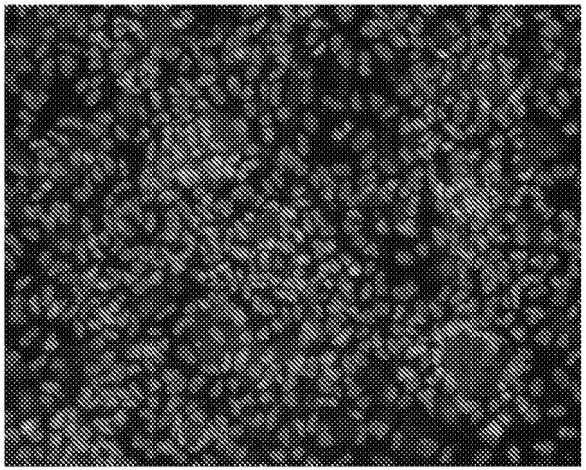
1 ng/ml Insulin



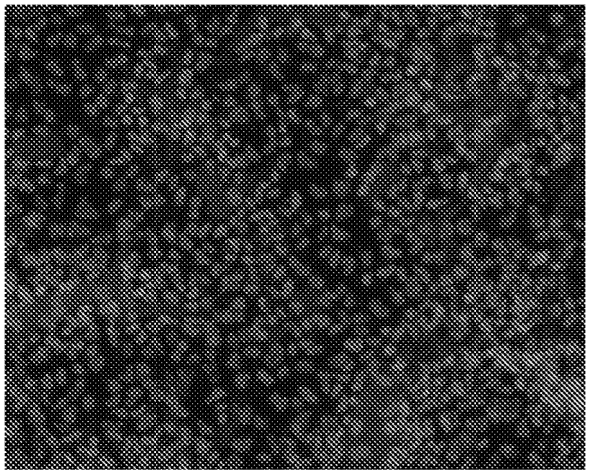
10 ng/ml Insulin



100 ng/ml Insulin



1 ug/ml Insulin



10 ug/ml Insulin

Figure 5

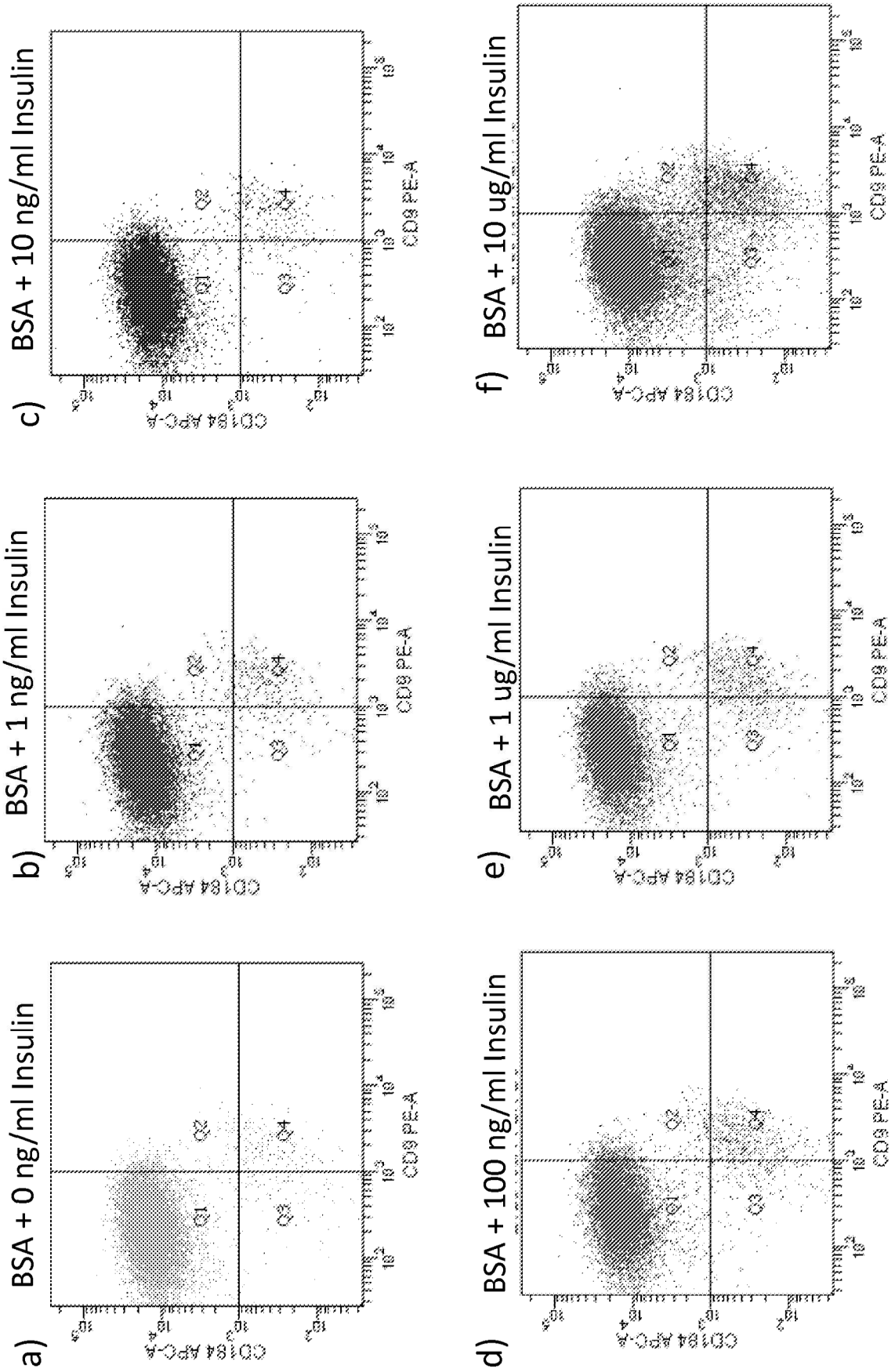

a)
BSA + 0 ng/ml Insulin
b)
BSA + 1 ng/ml Insulin
c)
BSA + 10 ng/ml Insulin
d)
BSA + 100 ng/ml Insulin
e)
BSA + 1 ug/ml Insulin
f)
BSA + 10 ug/ml Insulin
CD184 APC-A
CD9 PE-A
Q1
Q2
Q3
Q4

Figure 6

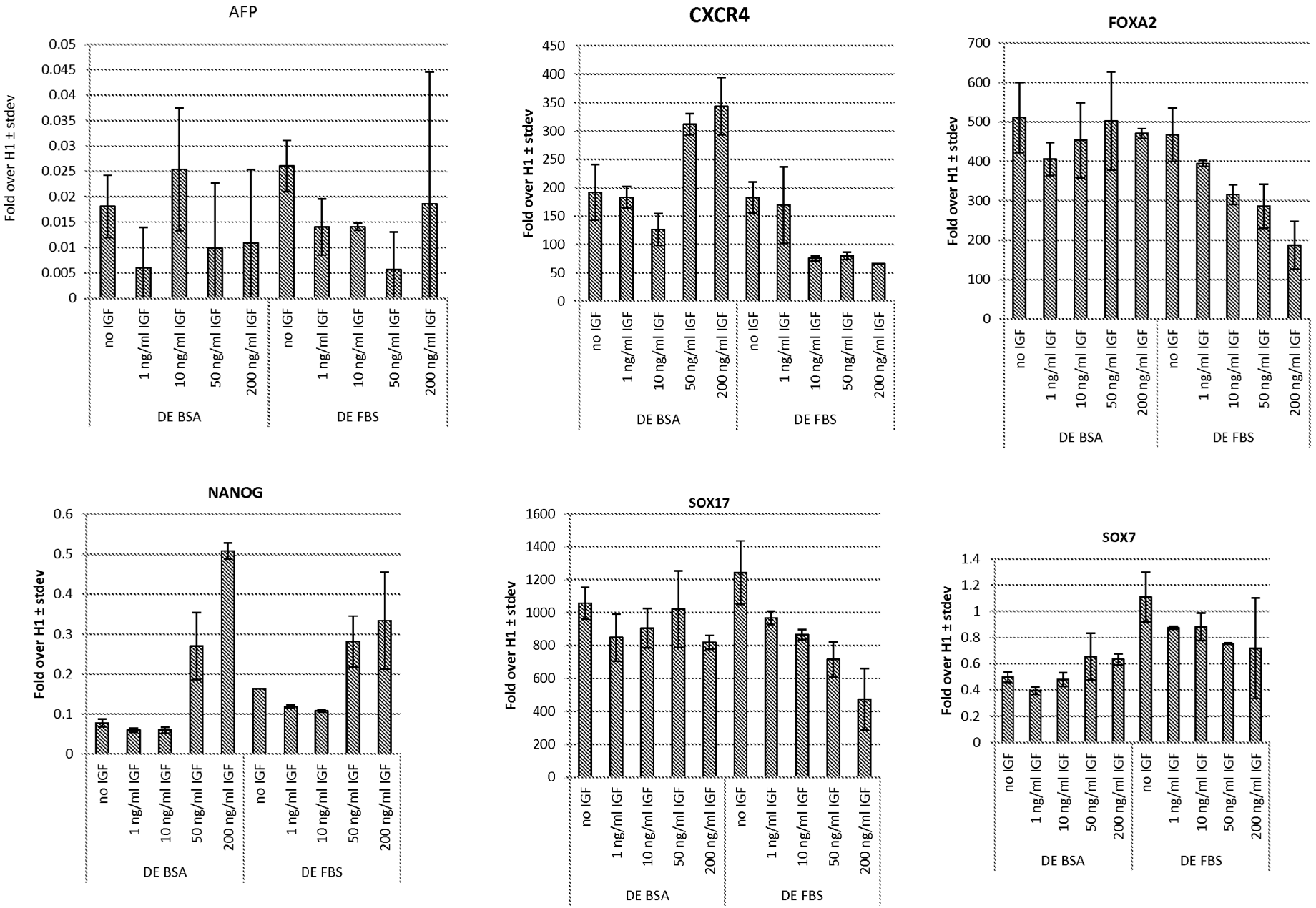
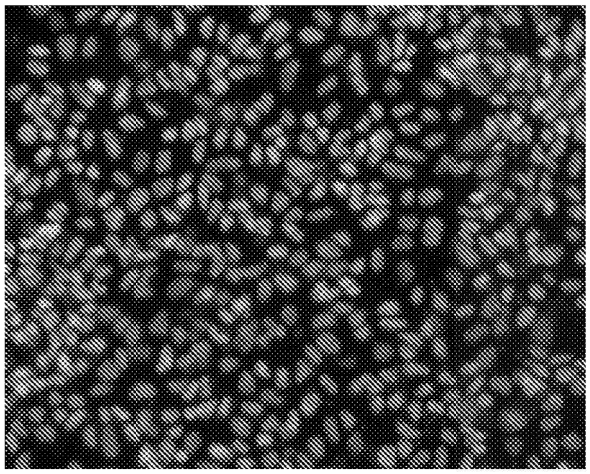

AFP
Fold over H1 ± stdev
0.05
0.045
0.04
0.035
0.03
0.025
0.02
0.015
0.01
0.005
0
no IGF
1 ng/ml IGF
10 ng/ml IGF
50 ng/ml IGF
200 ng/ml IGF
DE BSA
DE FBS
CXCR4
450
400
350
300
250
200
150
100
50
FOXA2
700
600
500
400
300
NANOG
0.6
0.5
0.4
0.3
0.2
0.1
SOX17
1600
1400
1200
1000
800
600
400
200
SOX7
1.4
1.2
1
0.8
0.6
0.4
0.2

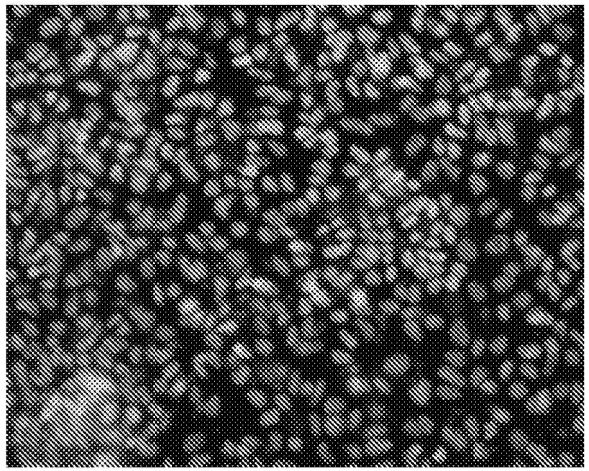
Figure 7

2% BSA

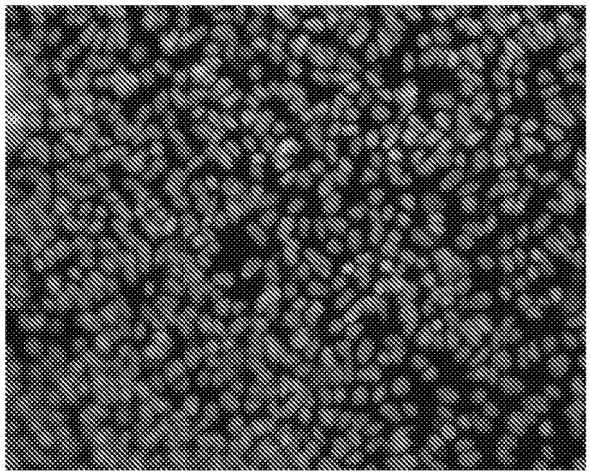
Sox 17-Green/DAPI-Blue



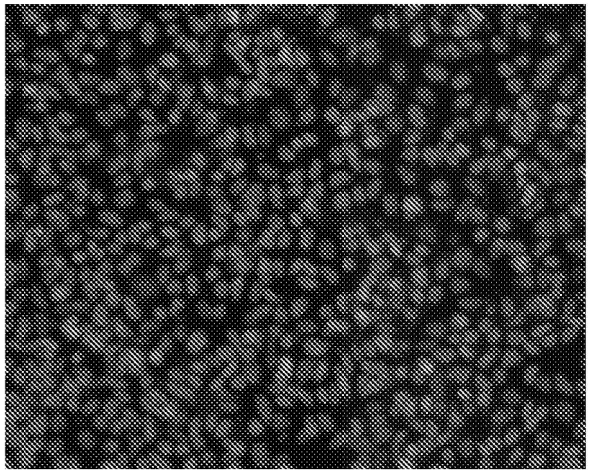
No IGF



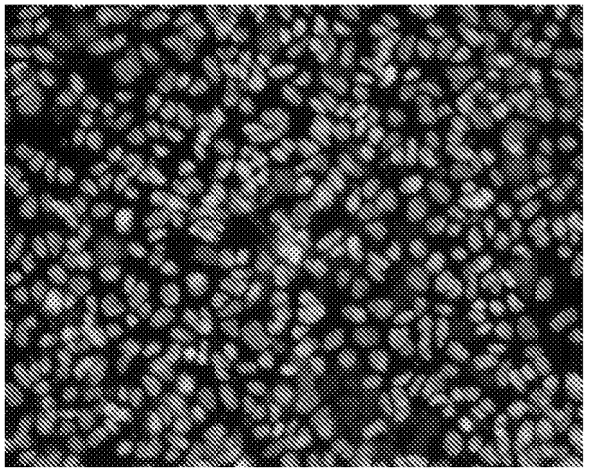
1 ng/ml IGF



10 ng/ml IGF



50 ng/ml IGF

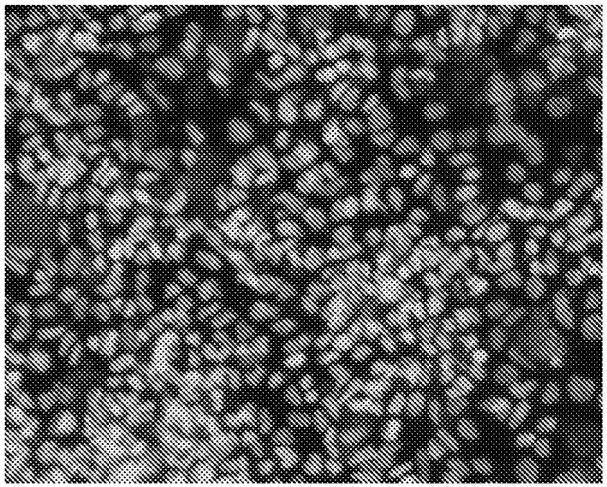


200 ng/ml IGF

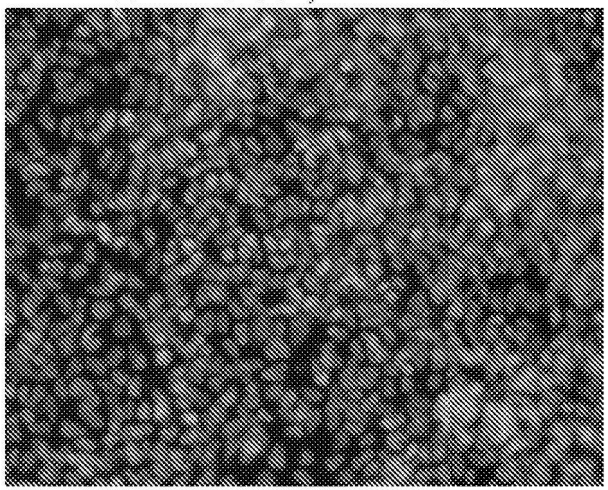
Figure 8

2% FBS

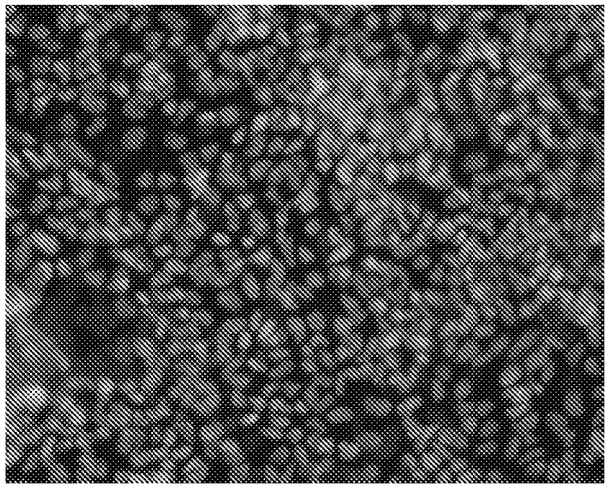
Sox 17-Green/DAPI-Blue



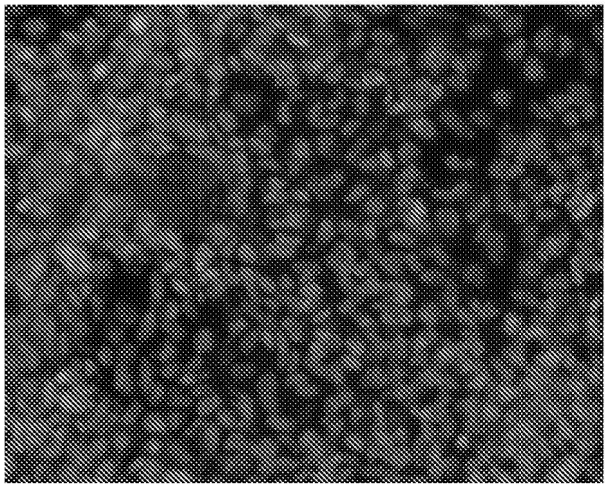
No IGF



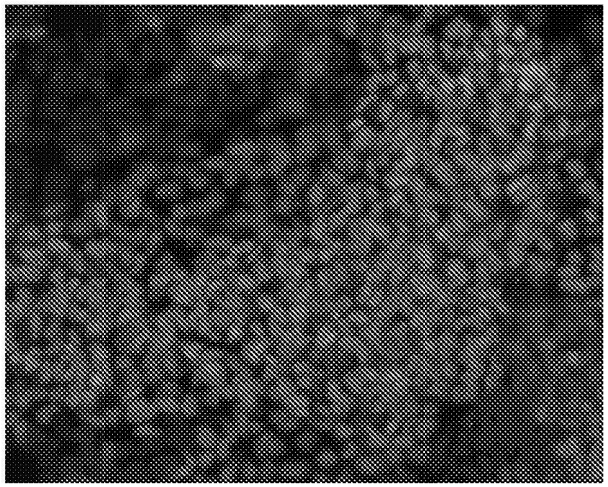
1 ng/ml IGF



10 ng/ml IGF



50 ng/ml IGF

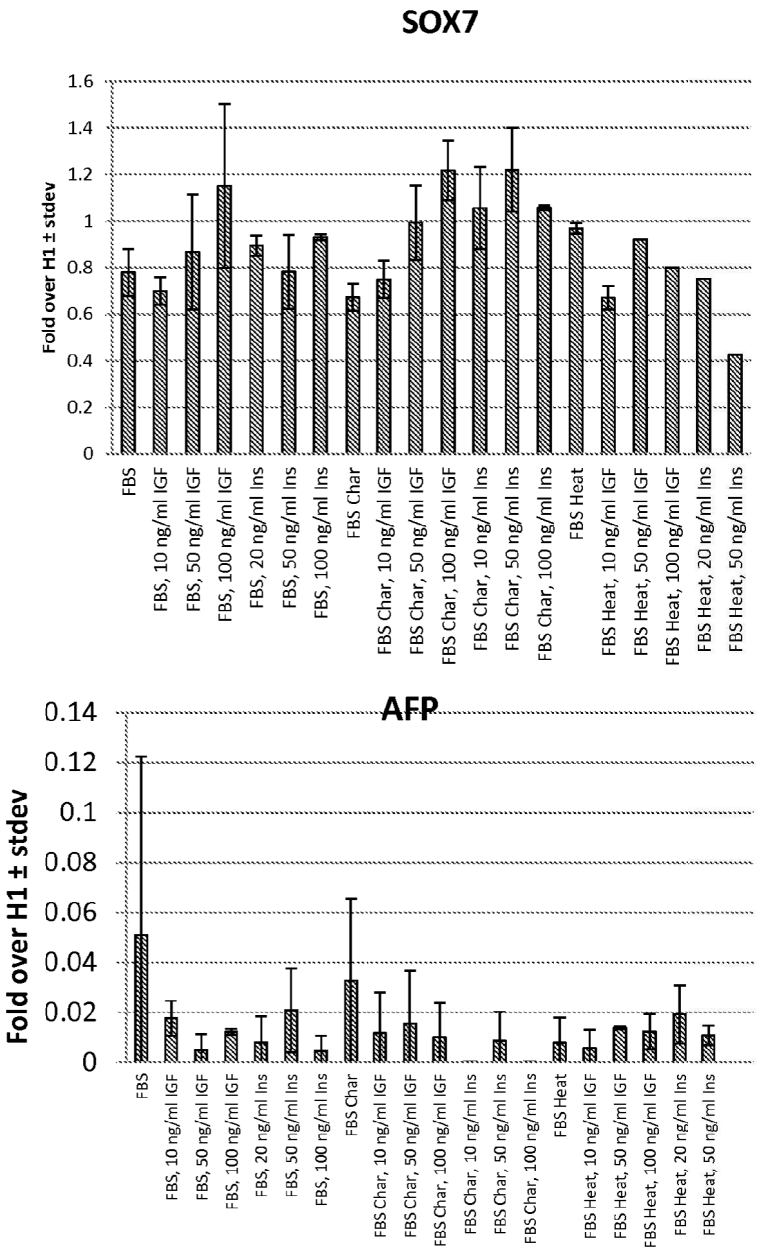


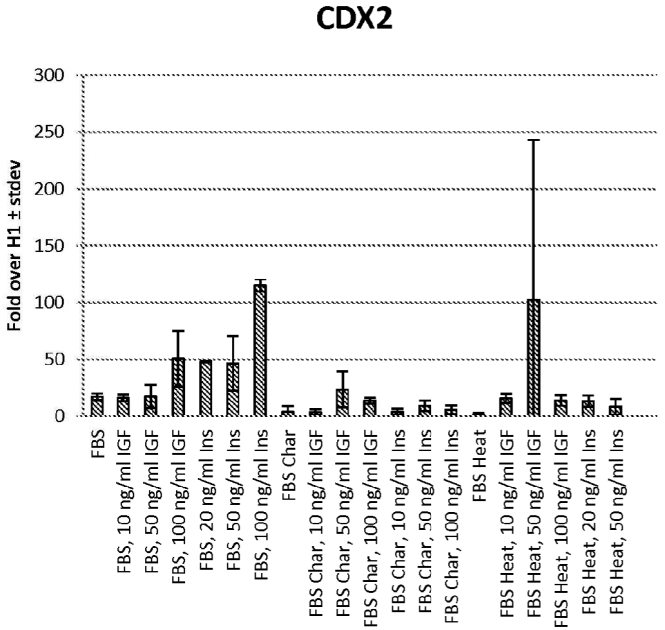
200 ng/ml IGF

Figure 9

SOX17
Fold over H1 ± stdev
0
200
400
600
800
1000
1200
1400
FBS
FBS, 10 ng/ml IGF
FBS, 50 ng/ml IGF
FBS, 100 ng/ml IGF
FBS, 20 ng/ml Ins
FBS, 50 ng/ml Ins
FBS, 100 ng/ml Ins
FBS Char
FBS Char, 10 ng/ml IGF
FBS Char, 50 ng/ml IGF
FBS Char, 100 ng/ml IGF
FBS Char, 10 ng/ml Ins
FBS Char, 50 ng/ml Ins
FBS Char, 100 ng/ml Ins
FBS Heat
FBS Heat, 10 ng/ml IGF
FBS Heat, 50 ng/ml IGF
FBS Heat, 100 ng/ml IGF
FBS Heat, 20 ng/ml Ins
FBS Heat, 50 ng/ml Ins
CXCR4
Fold over H1 ± stdev
0
50
100
150
200
250
FBS
FBS, 10 ng/ml IGF
FBS, 50 ng/ml IGF
FBS, 100 ng/ml IGF
FBS, 20 ng/ml Ins
FBS, 50 ng/ml Ins
FBS, 100 ng/ml Ins
FBS Char
FBS Char, 10 ng/ml IGF
FBS Char, 50 ng/ml IGF
FBS Char, 100 ng/ml IGF
FBS Char, 10 ng/ml Ins
FBS Char, 50 ng/ml Ins
FBS Char, 100 ng/ml Ins
FBS Heat
FBS Heat, 10 ng/ml IGF
FBS Heat, 50 ng/ml IGF
FBS Heat, 100 ng/ml IGF
FBS Heat, 20 ng/ml Ins
FBS Heat, 50 ng/ml Ins
NANOG
Fold over H1 ± stdev
0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
FBS
FBS, 10 ng/ml IGF
FBS, 50 ng/ml IGF
FBS, 100 ng/ml IGF
FBS, 20 ng/ml Ins
FBS, 50 ng/ml Ins
FBS, 100 ng/ml Ins
FBS Char
FBS Char, 10 ng/ml IGF
FBS Char, 50 ng/ml IGF
FBS Char, 100 ng/ml IGF
FBS Char, 10 ng/ml Ins
FBS Char, 50 ng/ml Ins
FBS Char, 100 ng/ml Ins
FBS Heat
FBS Heat, 10 ng/ml IGF
FBS Heat, 50 ng/ml IGF
FBS Heat, 100 ng/ml IGF
FBS Heat, 20 ng/ml Ins
FBS Heat, 50 ng/ml Ins
FOXA2
Fold over H1 ± stdev
0
50
100
150
200
250
300
350
400
450
FBS
FBS, 10 ng/ml IGF
FBS, 50 ng/ml IGF
FBS, 100 ng/ml IGF
FBS, 20 ng/ml Ins
FBS, 50 ng/ml Ins
FBS, 100 ng/ml Ins
FBS Char
FBS Char, 10 ng/ml IGF
FBS Char, 50 ng/ml IGF
FBS Char, 100 ng/ml IGF
FBS Char, 10 ng/ml Ins
FBS Char, 50 ng/ml Ins
FBS Char, 100 ng/ml Ins
FBS Heat
FBS Heat, 10 ng/ml IGF
FBS Heat, 50 ng/ml IGF
FBS Heat, 100 ng/ml IGF
FBS Heat, 20 ng/ml Ins
FBS Heat, 50 ng/ml Ins
FBS
FBS-Charcoal stripped
FBS-Heat treated

Figure 9


SOX7
Fold over H1 ± stdev
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
FBS
FBS, 10 ng/ml IGF
FBS, 50 ng/ml IGF
FBS, 100 ng/ml IGF
FBS, 20 ng/ml Ins
FBS, 50 ng/ml Ins
FBS, 100 ng/ml Ins
FBS Char
FBS Char, 10 ng/ml IGF
FBS Char, 50 ng/ml IGF
FBS Char, 100 ng/ml IGF
FBS Char, 10 ng/ml Ins
FBS Char, 50 ng/ml Ins
FBS Char, 100 ng/ml Ins
FBS Heat
FBS Heat, 10 ng/ml IGF
FBS Heat, 50 ng/ml IGF
FBS Heat, 100 ng/ml IGF
FBS Heat, 20 ng/ml Ins
FBS Heat, 50 ng/ml Ins


CDX2
Fold over H1 ± stdev
300
250
200
150
100
50
0
FBS
FBS, 10 ng/ml IGF
FBS, 50 ng/ml IGF
FBS, 100 ng/ml IGF
FBS, 20 ng/ml Ins
FBS, 50 ng/ml Ins
FBS, 100 ng/ml Ins
FBS Char
FBS Char, 10 ng/ml IGF
FBS Char, 50 ng/ml IGF
FBS Char, 100 ng/ml IGF
FBS Char, 10 ng/ml Ins
FBS Char, 50 ng/ml Ins
FBS Char, 100 ng/ml Ins
FBS Heat
FBS Heat, 10 ng/ml IGF
FBS Heat, 50 ng/ml IGF
FBS Heat, 100 ng/ml IGF
FBS Heat, 20 ng/ml Ins
FBS Heat, 50 ng/ml Ins

AFP
Fold over H1 ± stdev
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0
FBS
FBS, 10 ng/ml IGF
FBS, 50 ng/ml IGF
FBS, 100 ng/ml IGF
FBS, 20 ng/ml Ins
FBS, 50 ng/ml Ins
FBS, 100 ng/ml Ins
FBS Char
FBS Char, 10 ng/ml IGF
FBS Char, 50 ng/ml IGF
FBS Char, 100 ng/ml IGF
FBS Char, 10 ng/ml Ins
FBS Char, 50 ng/ml Ins
FBS Char, 100 ng/ml Ins
FBS Heat
FBS Heat, 10 ng/ml IGF
FBS Heat, 50 ng/ml IGF
FBS Heat, 100 ng/ml IGF
FBS Heat, 20 ng/ml Ins
FBS Heat, 50 ng/ml Ins