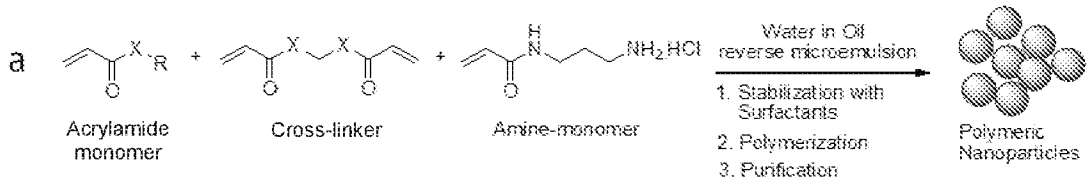
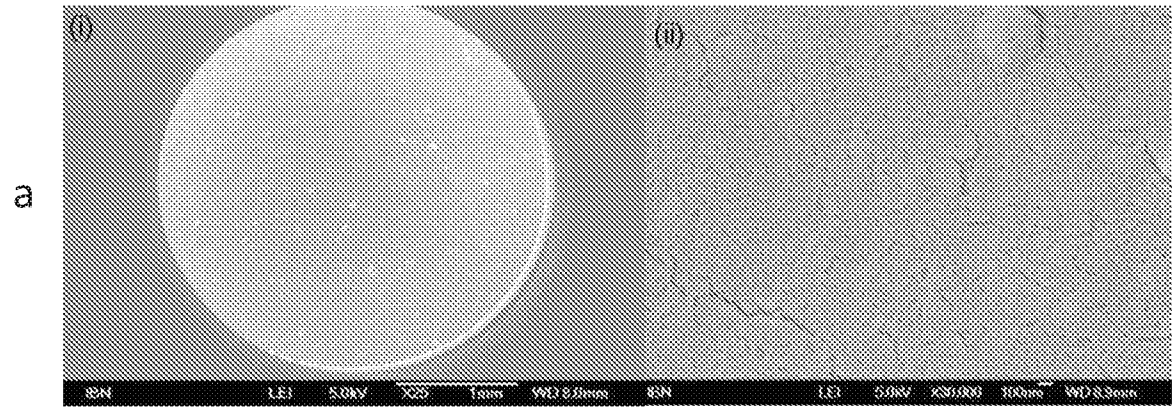
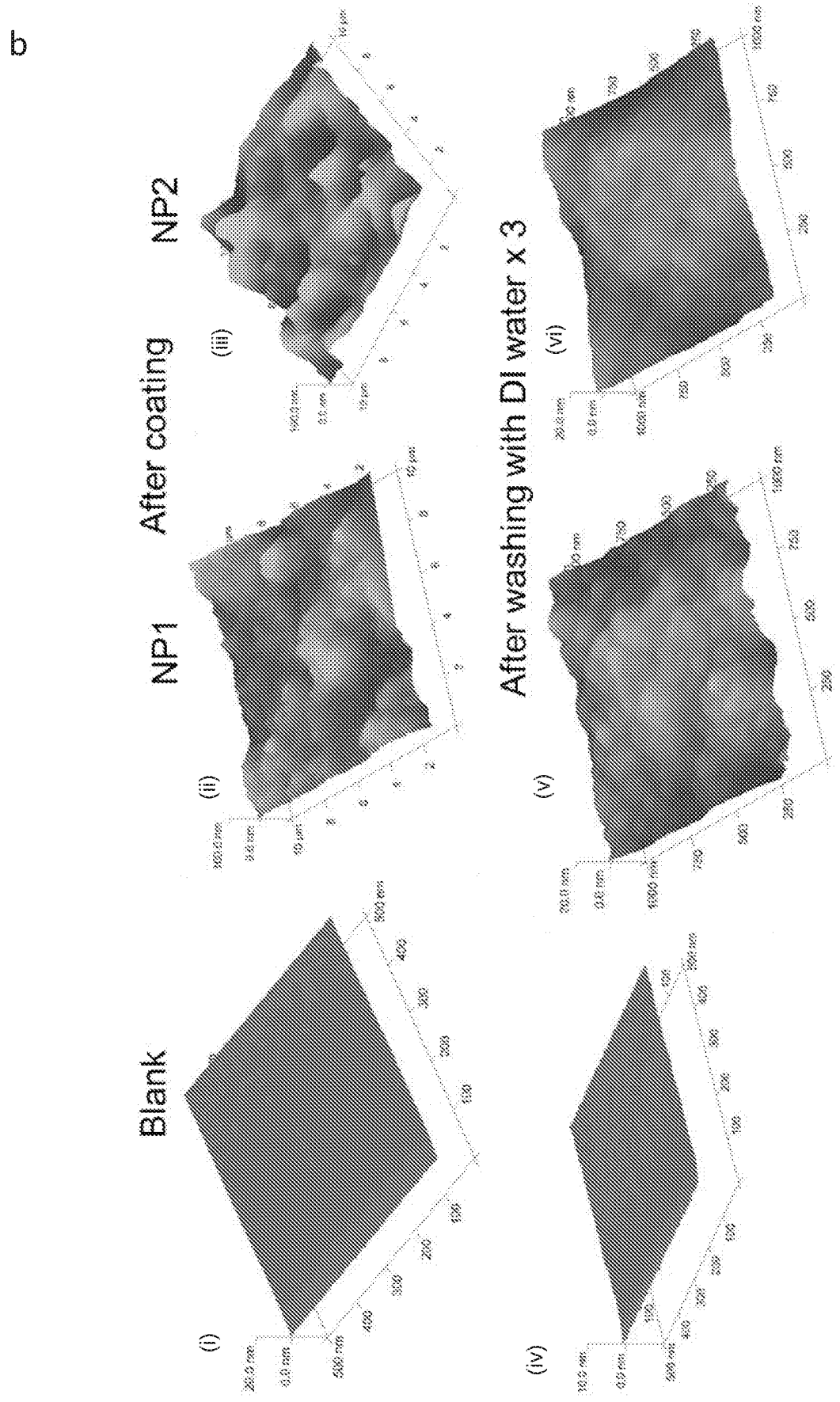
[Fig. 1]


a
Acrylamide monomer
Cross-linker
Amine-monomer
Water in Oil reverse microemulsion
1. Stabilization with Surfactants
2. Polymerization
3. Purification
Polymeric Nanoparticles

[Fig. 2]

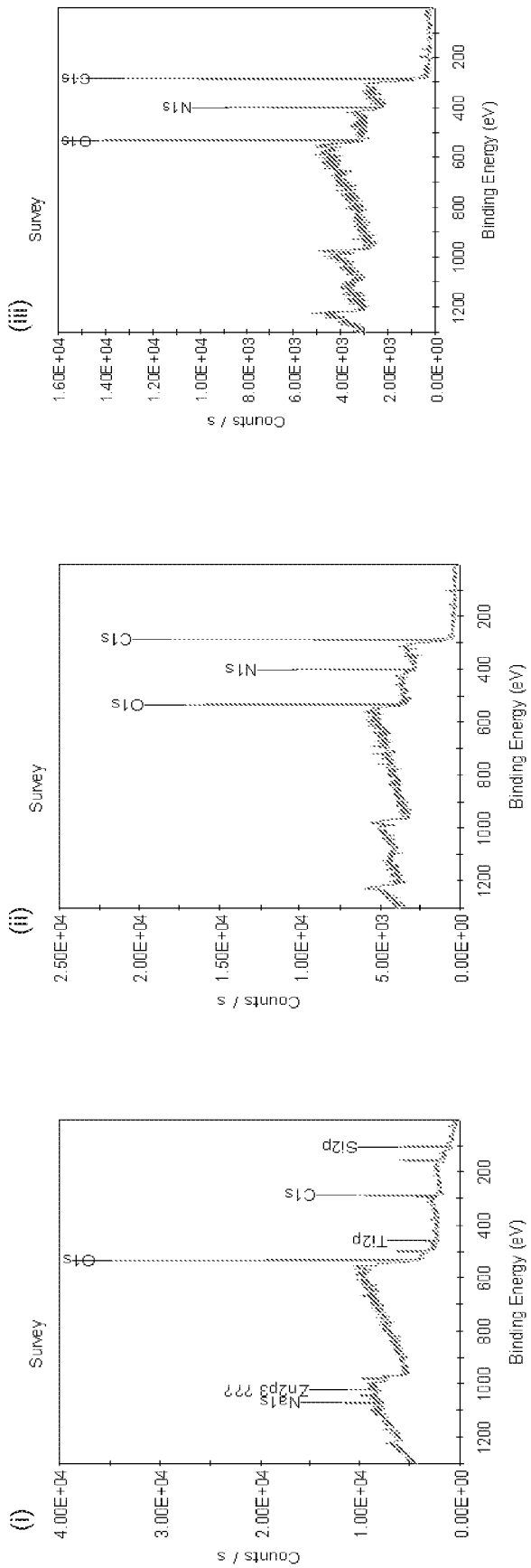

a
(i)
(ii)

[Fig. 2]

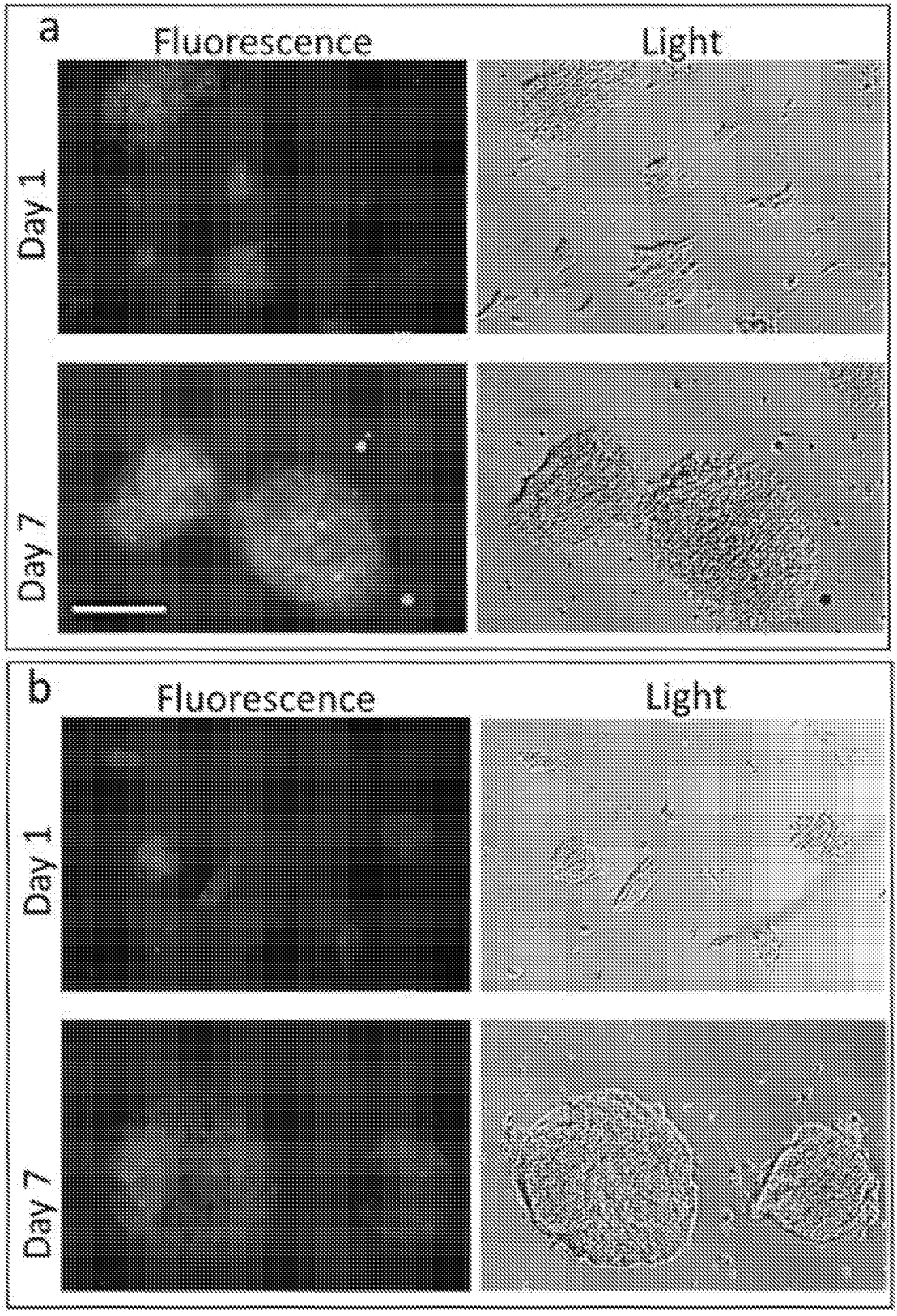

b
Blank
NP1
After coating
NP2
After washing with DI water x 3
(i)
(ii)
(iii)
(iv)
(v)
(vi)

[Fig. 2]

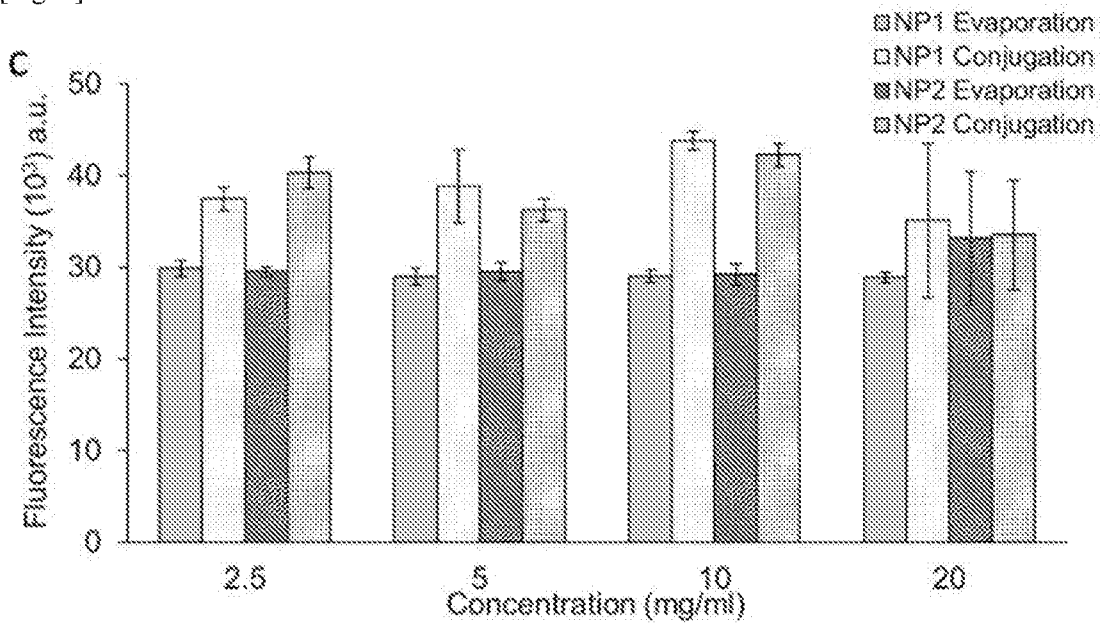
C


(iii)
Survey
O1s
N1s
C1s
Counts / s
Binding Energy (eV)
(ii)
Survey
O1s
N1s
C1s
Counts / s
Binding Energy (eV)
(i)
Survey
O1s
Ti2p
C1s
Si2p
Na1s
Zn2p3 ???
Counts / s
Binding Energy (eV)

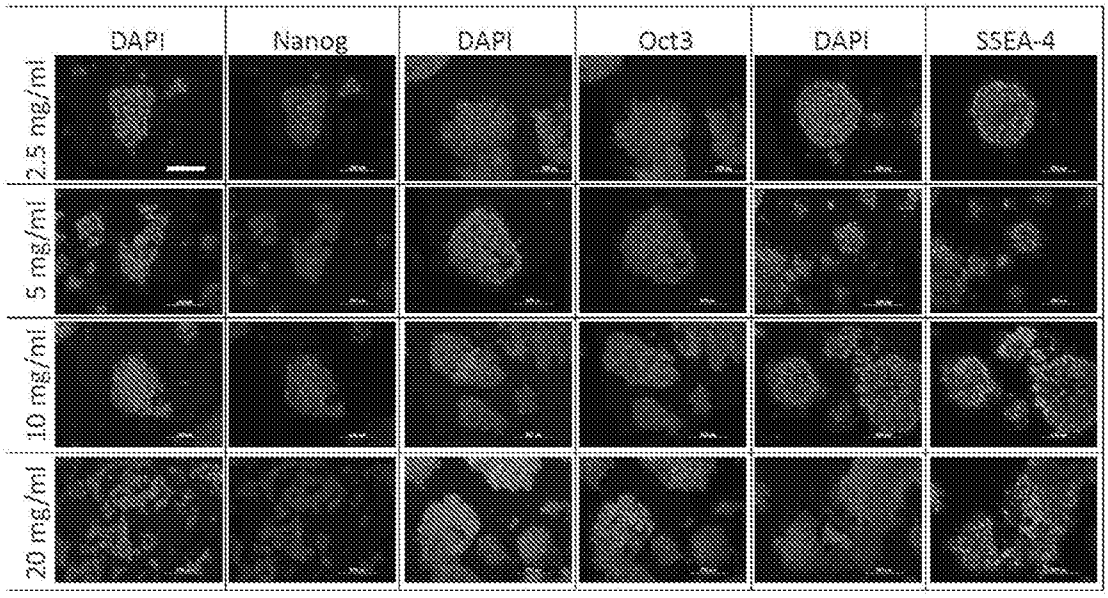
[Fig. 3]


a
Fluorescence
Light
Day 1
Day 7
b
Fluorescence
Light
Day 1
Day 7

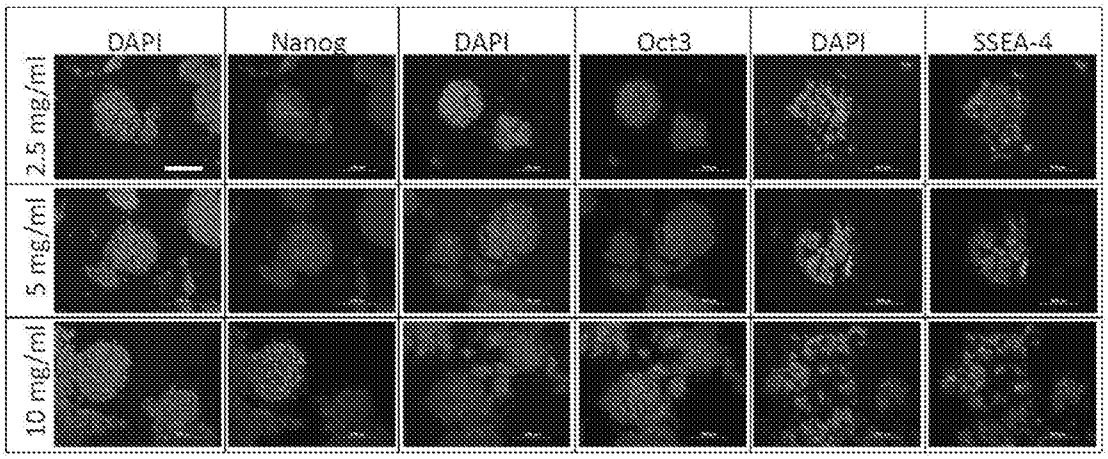
[Fig. 3]


C
NP1 Evaporation
NP1 Conjugation
NP2 Evaporation
NP2 Conjugation
Fluorescence Intensity (10^3) a.u.
0
10
20
30
40
50
2.5
5
10
20
Concentration (mg/ml)

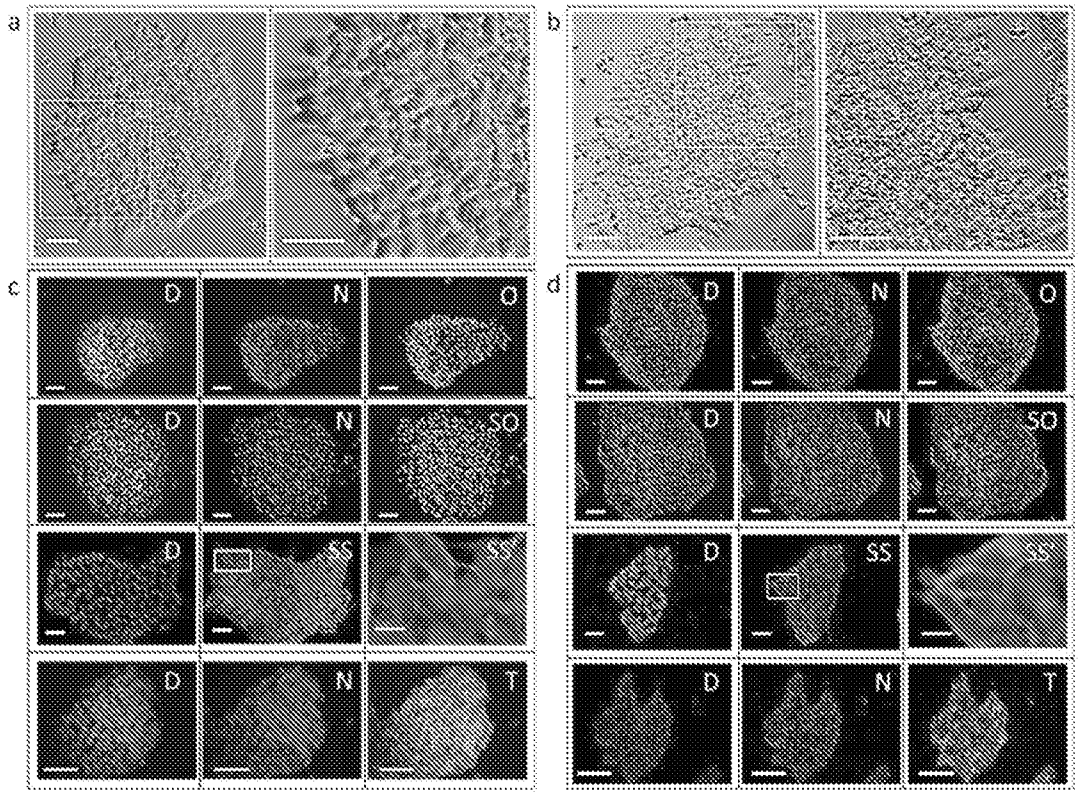
[Fig. 4]


DAPI
Nanog
DAPI
Oct3
DAPI
SSEA-4
2.5 mg/ml
5 mg/ml
10 mg/ml
20 mg/ml

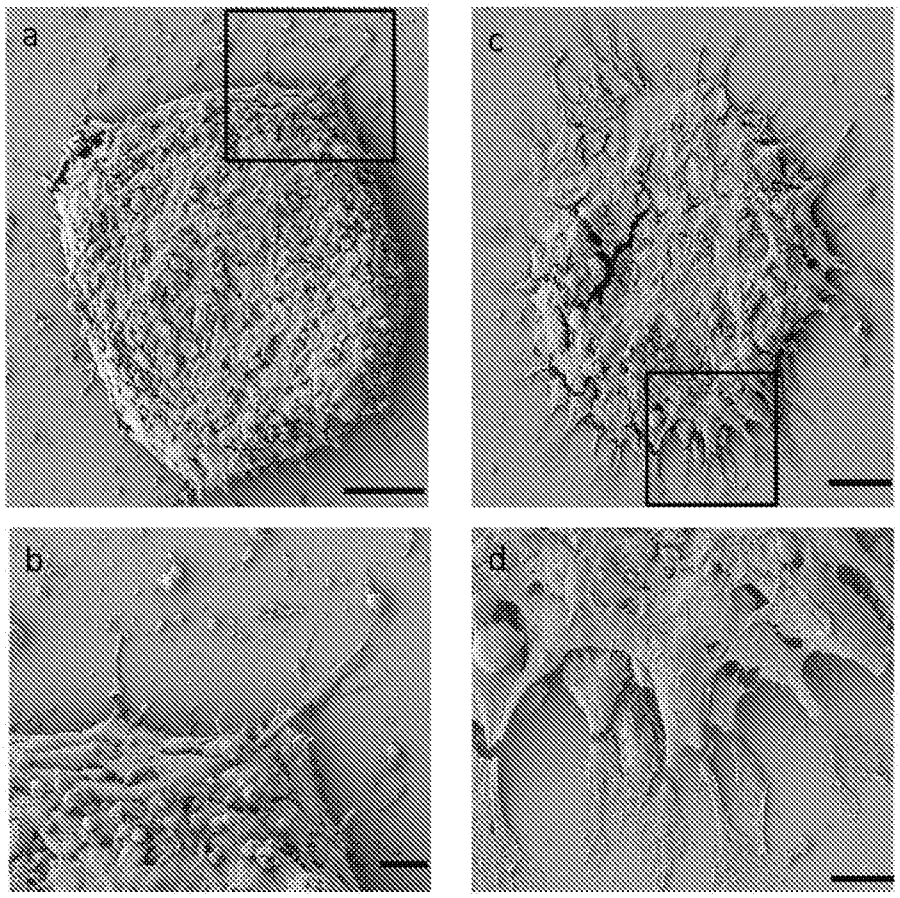
[Fig. 5]


DAPI
Nanog
DAPI
Oct3
DAPI
SSEA-4
2.5 mg/ml
5 mg/ml
10 mg/ml

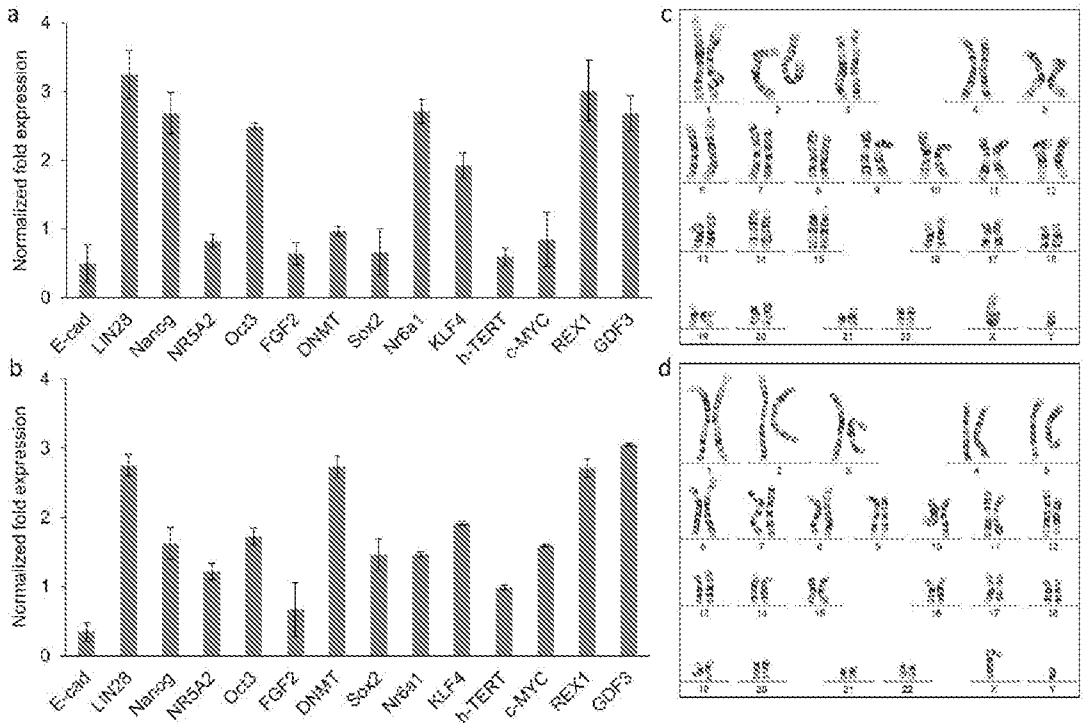
[Fig. 6]


a
b
c
d
D
N
O
SO
SS
T

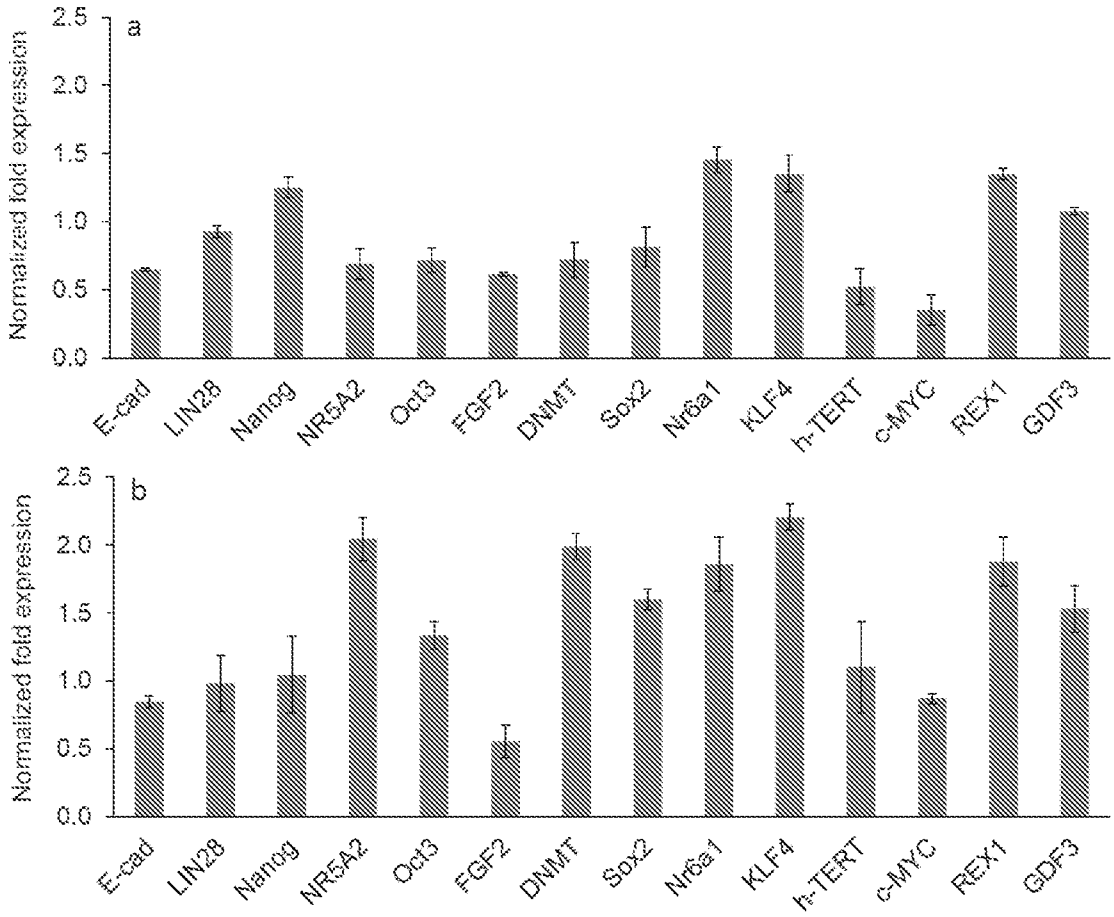
[Fig. 7]



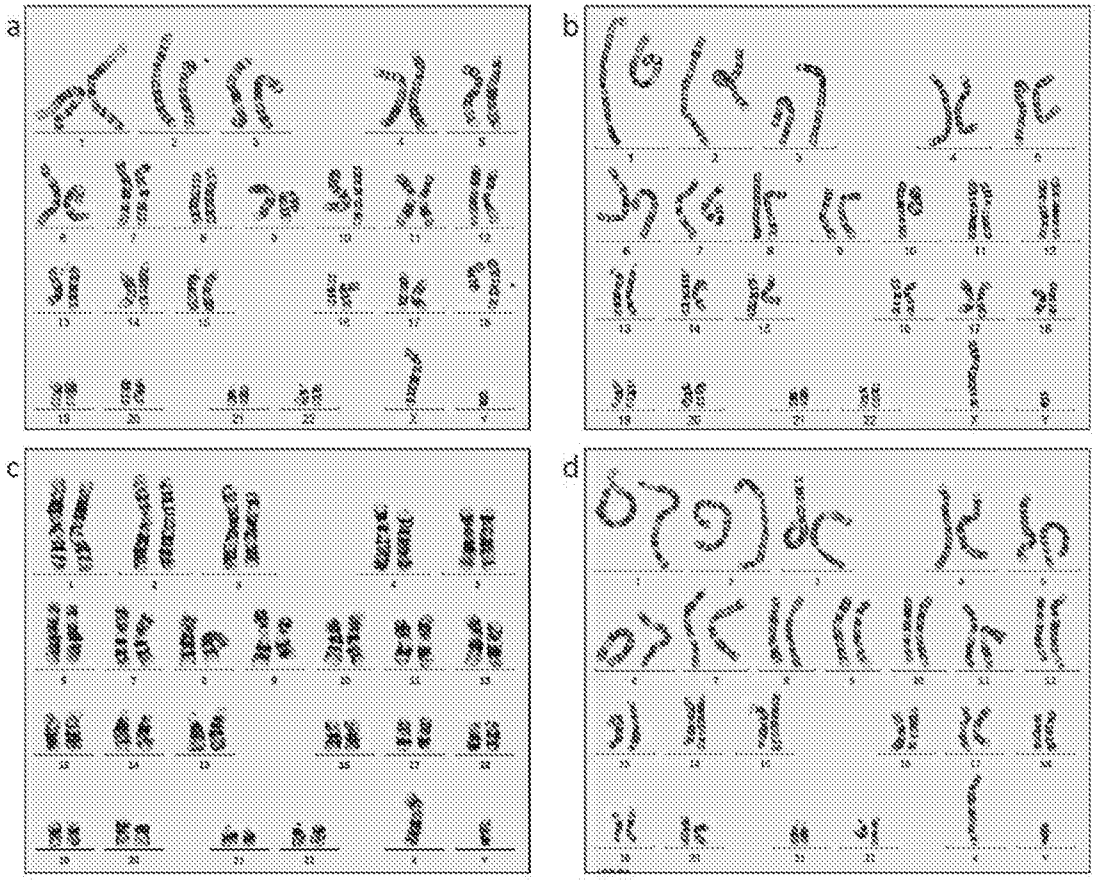
[Fig. 8]


a
Normalized fold expression
0
1
2
3
4
E-cad
LIN28
Nanog
NR5A2
Oct3
FGF2
DNMT
Sox2
Nr6a1
KLF4
h-TERT
c-MYC
REX1
GDF3
b
Normalized fold expression
0
1
2
3
4
E-cad
LIN28
Nanog
NR5A2
Oct3
FGF2
DNMT
Sox2
Nr6a1
KLF4
h-TERT
c-MYC
REX1
GDF3
c
d

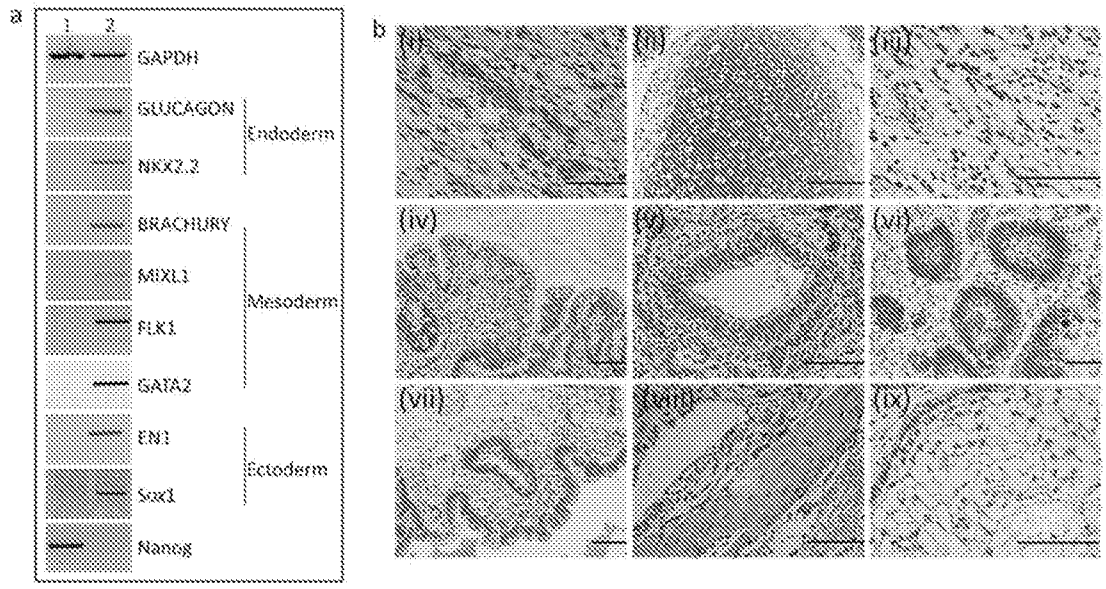
[Fig. 9]


a
Normalized fold expression
2.5
2.0
1.5
1.0
0.5
0.0
E-cad
LIN28
Nanog
NR5A2
Oct3
FGF2
DNMT
Sox2
Nr6a1
KLF4
h-TERT
c-MYC
REX1
GDF3
b
Normalized fold expression
2.5
2.0
1.5
1.0
0.5
0.0
E-cad
LIN28
Nanog
NR5A2
Oct3
FGF2
DNMT
Sox2
Nr6a1
KLF4
h-TERT
c-MYC
REX1
GDF3

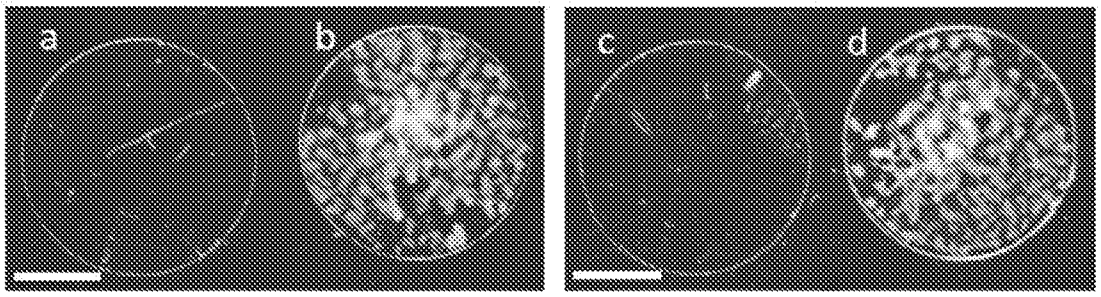
[Fig. 10]



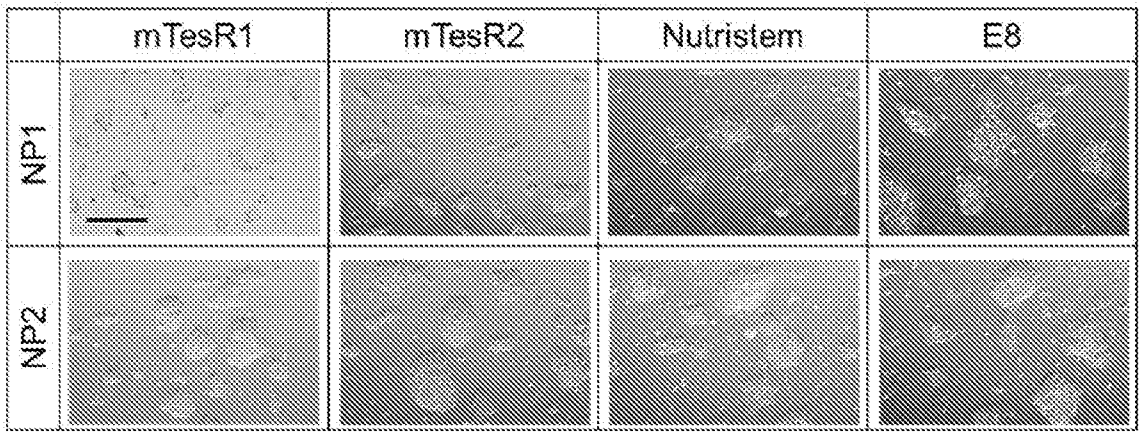
[Fig. 11]


a
1
2
GAPDH
GLUCAGON
NKX2.2
Endoderm
BRACHURY
MIXL1
FLK1
Mesoderm
GATA2
EN1
Sox1
Ectoderm
Nanog
b
(i)
(ii)
(iii)
(iv)
(v)
(vi)
(vii)
(viii)
(ix)

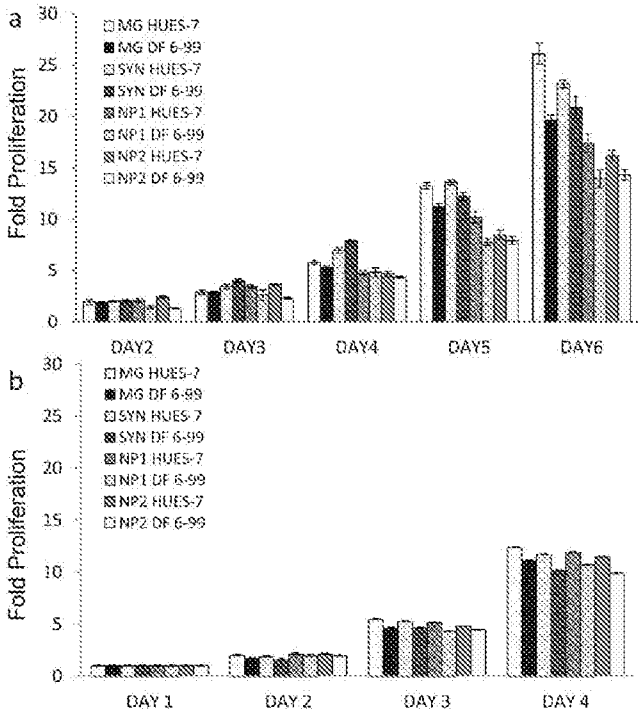
[Fig. 12]


a
b
c
d

[Fig. 13]



[Fig. 14]



c

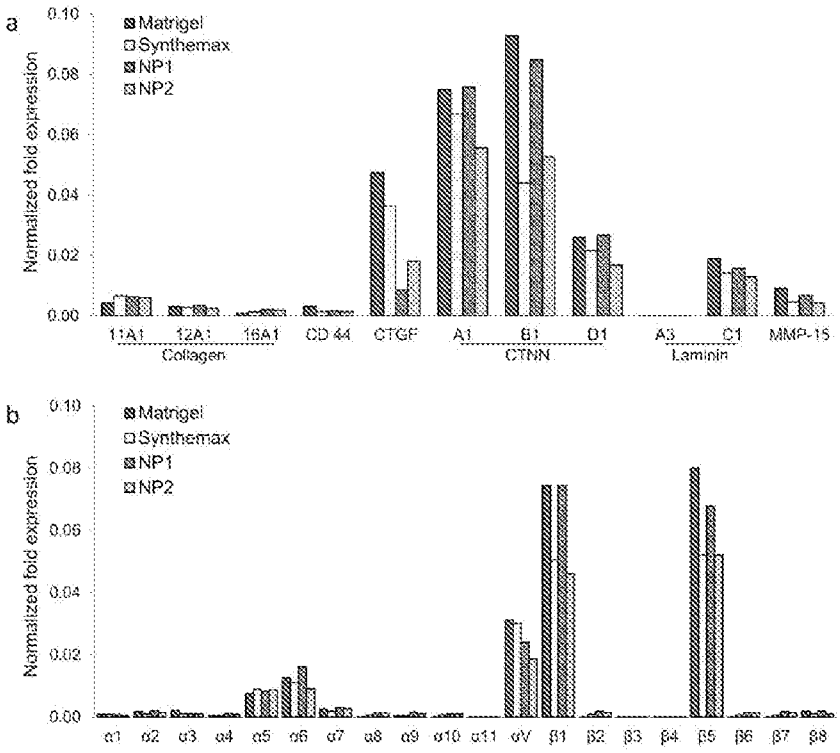
Cell Line	Substrates	mTesR1	mTesR2
HUES-7	Matrigel	25.6±1.4	20.3±3.7
DF 6-99	Matrigel	25.9±8.5	22.1±7.8
HUES-7	Synthemax	22.8±1.3	21.1±5.1
DF 6-99	Synthemax	25.4±7.5	23.9±9.2
HUES-7	NP1	31.1±4.0	20.1±2.0
DF 6-99	NP1	34.4±5.4	21.1±2.7
HUES-7	NP2	31.7±7.0	20.6±1.9
DF 6-99	NP2	35.4±4.3	21.9±2.8

[Fig. 14]

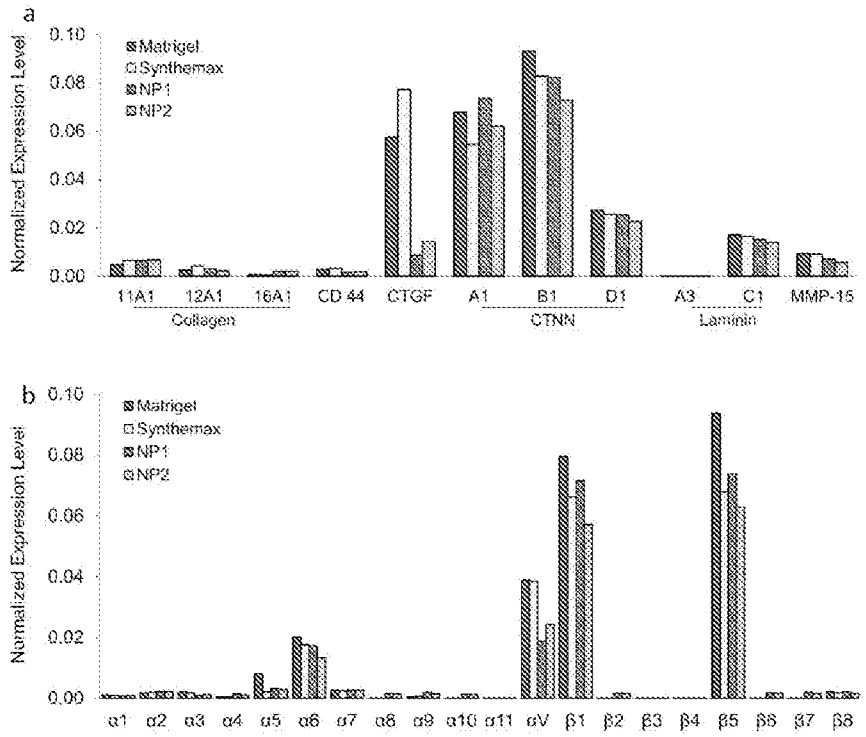
C

Substrates	Cell Line	mTesR1	mTesR2
Matrigel	HUES-7	25.6±1.4	20.3±3.7
	DF 6-99	25.9±8.5	22.1±7.8
Synthemax	HUES-7	22.8±1.3	21.1±5.1
	DF 6-99	25.4±7.5	23.9±9.2
NP1	HUES-7	31.1±4.0	20.1±2.0
	DF 6-99	34.4±5.4	21.1±2.7
NP2	HUES-7	31.7±7.0	20.6±1.9
	DF 6-99	35.4±4.3	21.9±2.8

[Fig. 15]



[Fig. 16]


a
Normalized Expression Level
0.10
0.08
0.06
0.04
0.02
0.00
Matrigel
Synthemax
NP1
NP2
11A1
12A1
16A1
CD 44
CTGF
A1
B1
D1
A3
C1
MMP-15
Collagen
CTNN
Laminin
b
Normalized Expression Level
0.10
0.08
0.06
0.04
0.02
0.00
Matrigel
Synthemax
NP1
NP2
α1 α2 α3 α4 α5 α6 α7 α8 α9 α10 α11 αV β1 β2 β3 β4 β5 β6 β7 β8