FIG. 1

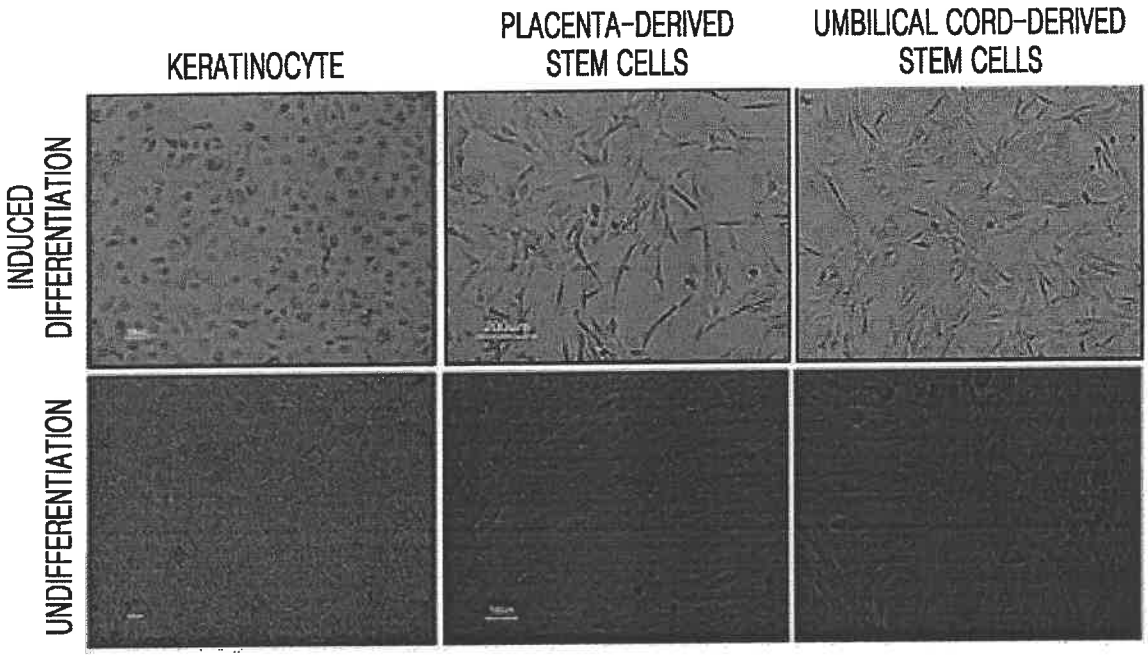

KERATINOCYTE
PLACENTA-DERIVED STEM CELLS
UMBILICAL CORD-DERIVED STEM CELLS
INDUCED DIFFERENTIATION
UNDIFFERENTIATION

FIG. 2

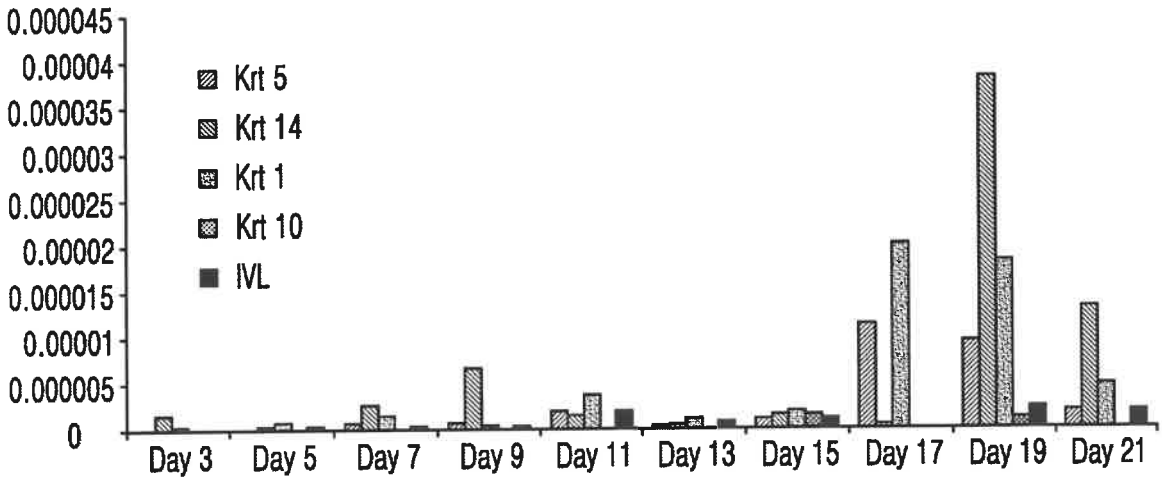

0.000045
0.00004
0.000035
0.00003
0.000025
0.00002
0.000015
0.00001
0.000005
0
Krt 5
Krt 14
Krt 1
Krt 10
IVL
Day 3
Day 5
Day 7
Day 9
Day 11
Day 13
Day 15
Day 17
Day 19
Day 21

FIG. 3

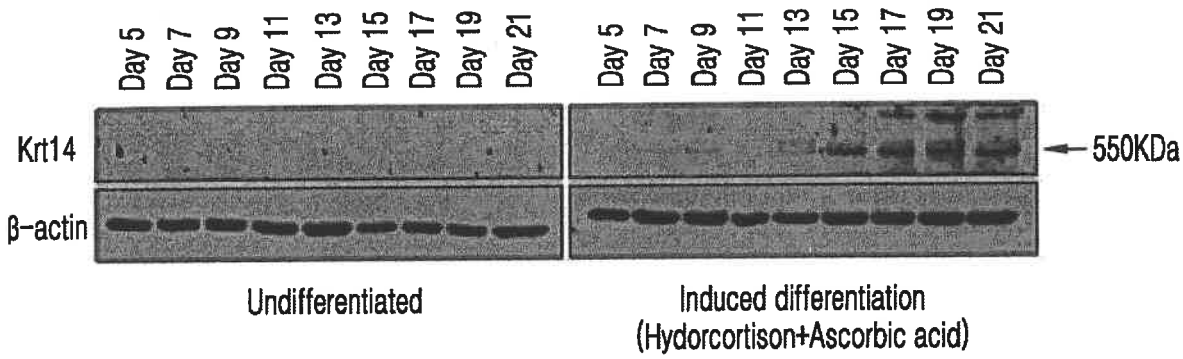

Day 5
Day 7
Day 9
Day 11
Day 13
Day 15
Day 17
Day 19
Day 21
Day 5
Day 7
Day 9
Day 11
Day 13
Day 15
Day 17
Day 19
Day 21
Krt14
β-actin
550KDa
Undifferentiated
Induced differentiation
(Hydorcortison+Ascorbic acid)

FIG. 4

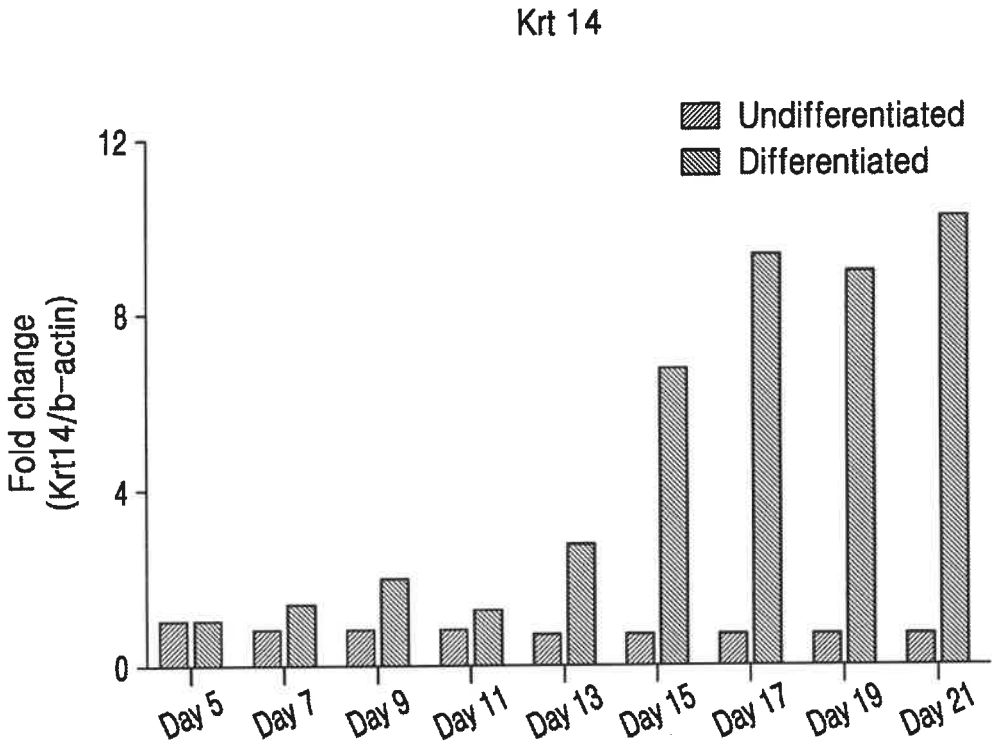

Krt 14
Undifferentiated
Differentiated
Fold change
(Krt14/b-actin)
12
8
4
0
Day 5
Day 7
Day 9
Day 11
Day 13
Day 15
Day 17
Day 19
Day 21

FIG. 5

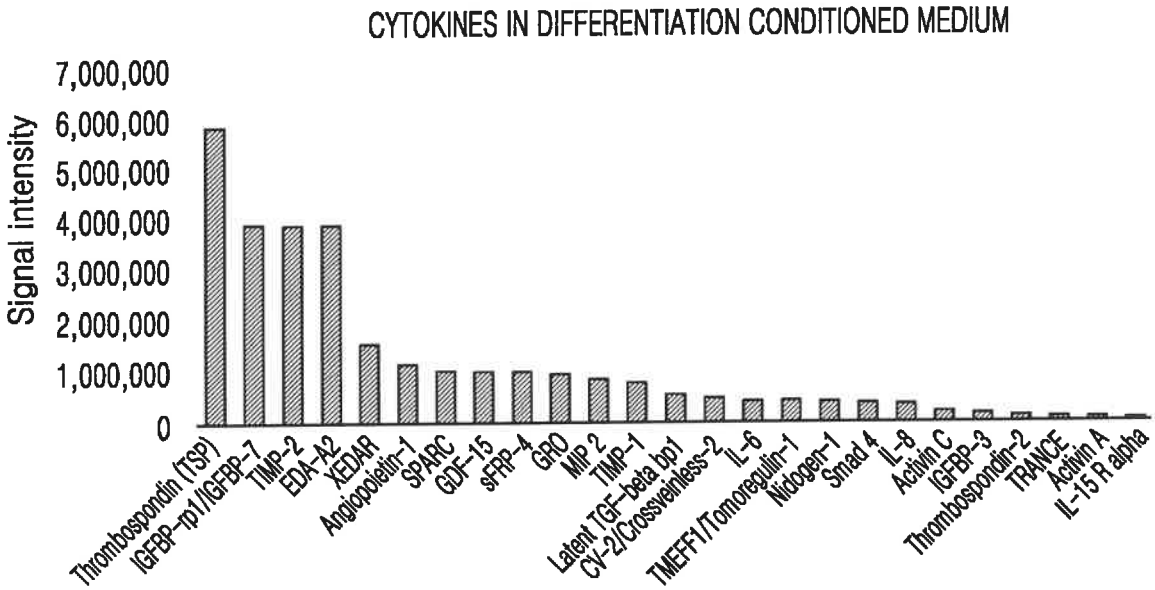

CYTOKINES IN DIFFERENTIATION CONDITIONED MEDIUM
Signal intensity
7,000,000
6,000,000
5,000,000
4,000,000
3,000,000
2,000,000
1,000,000
0
Thrombospondin (TSP)
IGFBP-rp1/IGFBP-7
TIMP-2
EDA-A2
XEDAR
Angiopoietin-1
SPARC
GDF-15
sFRP-4
GRO
MIP 2
TIMP-1
Latent TGF-beta bp1
CV-2/Crossveinless-2
IL-6
TMEFF1/Tomoregulin-1
Nidogen-1
Smad 4
IL-8
Activin C
IGFBP-3
Thrombospondin-2
TRANCE
Activin A
IL-15 R alpha

FIG. 6

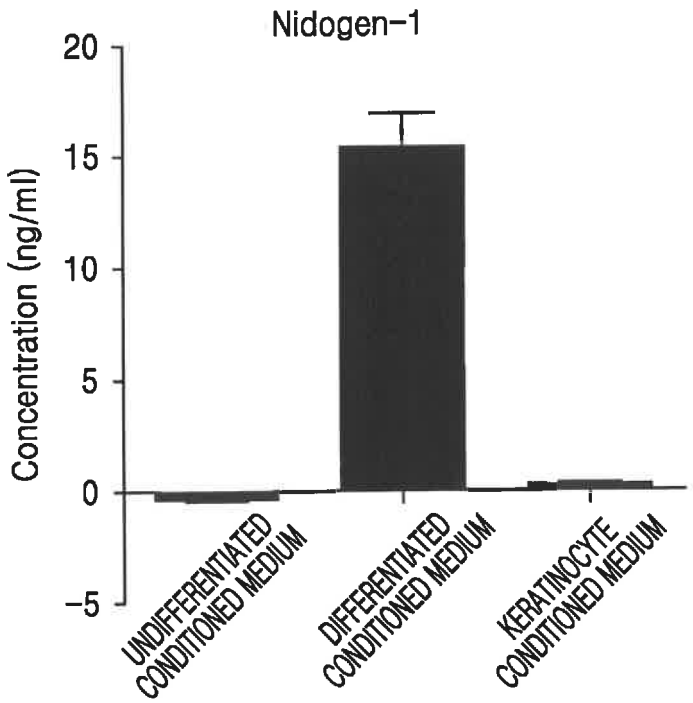

Nidogen-1
Concentration (ng/ml)
20
15
10
5
0
-5
UNDIFFERENTIATED CONDITIONED MEDIUM
DIFFERENTIATED CONDITIONED MEDIUM
KERATINOCYTE CONDITIONED MEDIUM

FIG. 7A

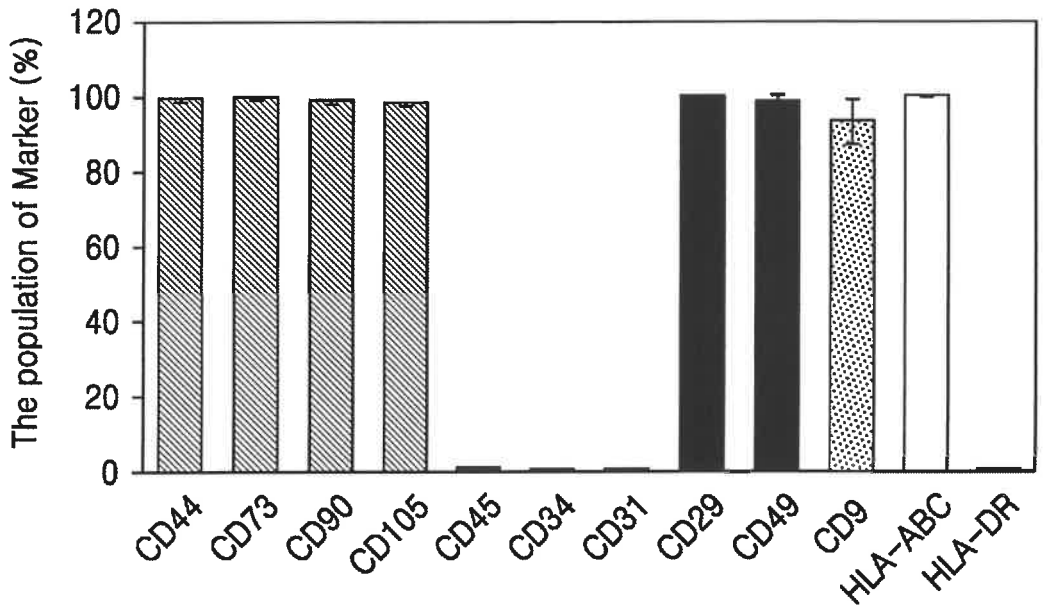
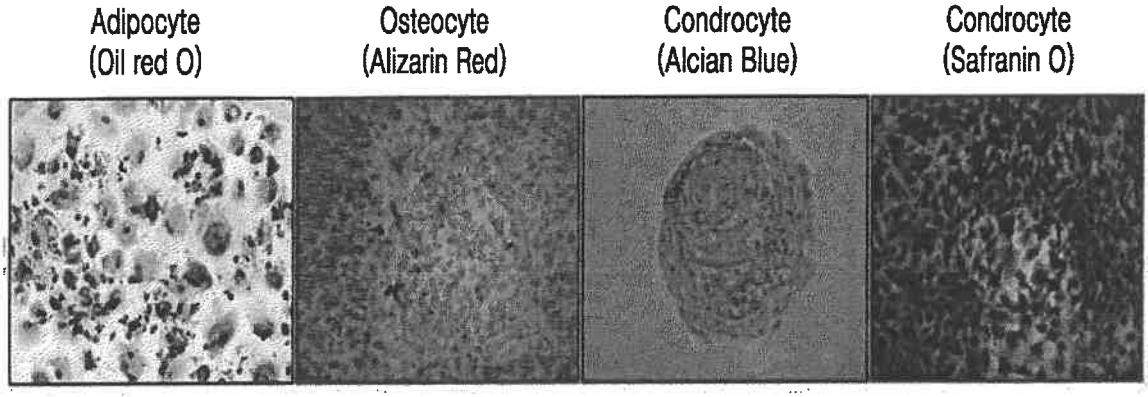

The population of Marker (%)
120
100
80
60
40
20
0
CD44
CD73
CD90
CD105
CD45
CD34
CD31
CD29
CD49
CD9
HLA-ABC
HLA-DR

FIG. 7B


Adipocyte
(Oil red O)
Osteocyte
(Alizarin Red)
Condrocyte
(Alcian Blue)
Condrocyte
(Safranin O)