FIG. 1

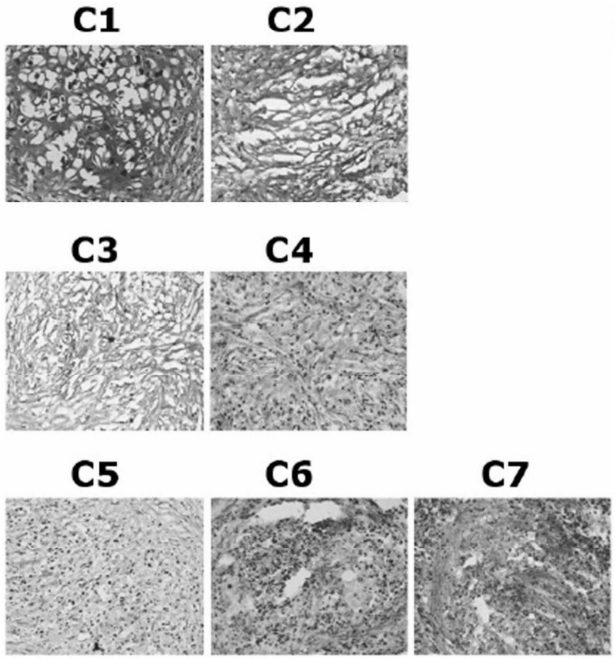


FIG. 2

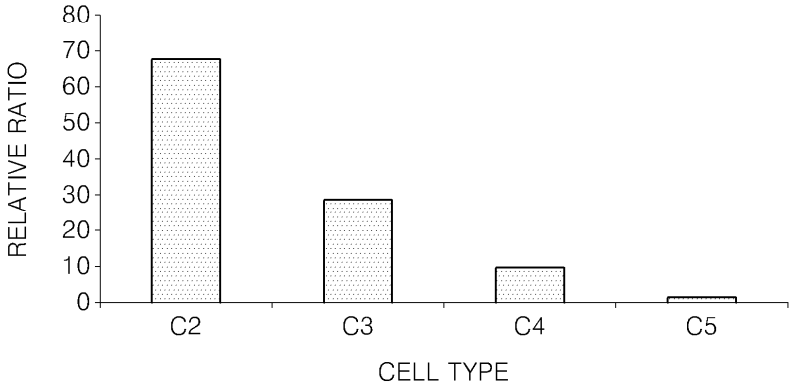


FIG. 3

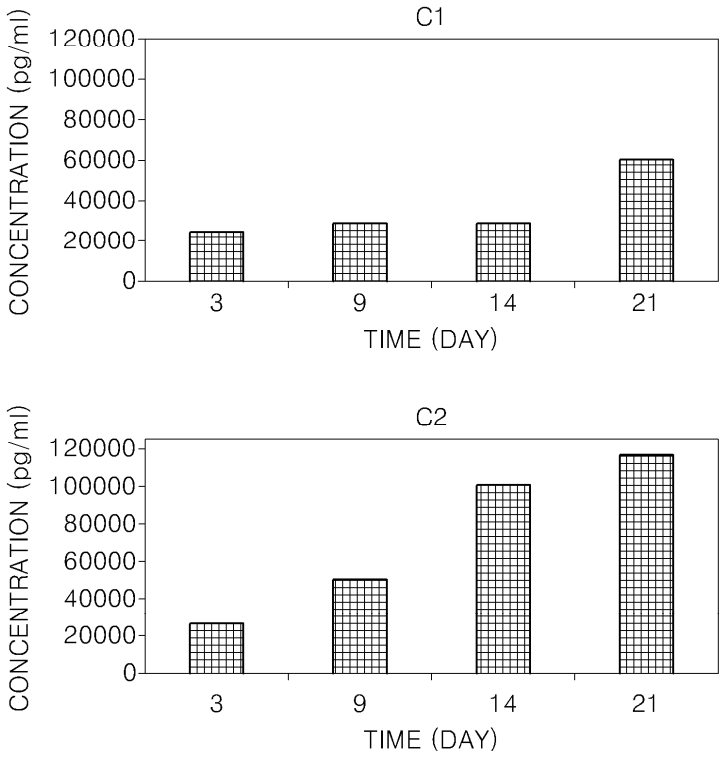

C1
CONCENTRATION (pg/ml)
120000
100000
80000
60000
40000
20000
0
3
9
14
21
TIME (DAY)
C2
CONCENTRATION (pg/ml)
120000
100000
80000
60000
40000
20000
0
3
9
14
21
TIME (DAY)

FIG. 4

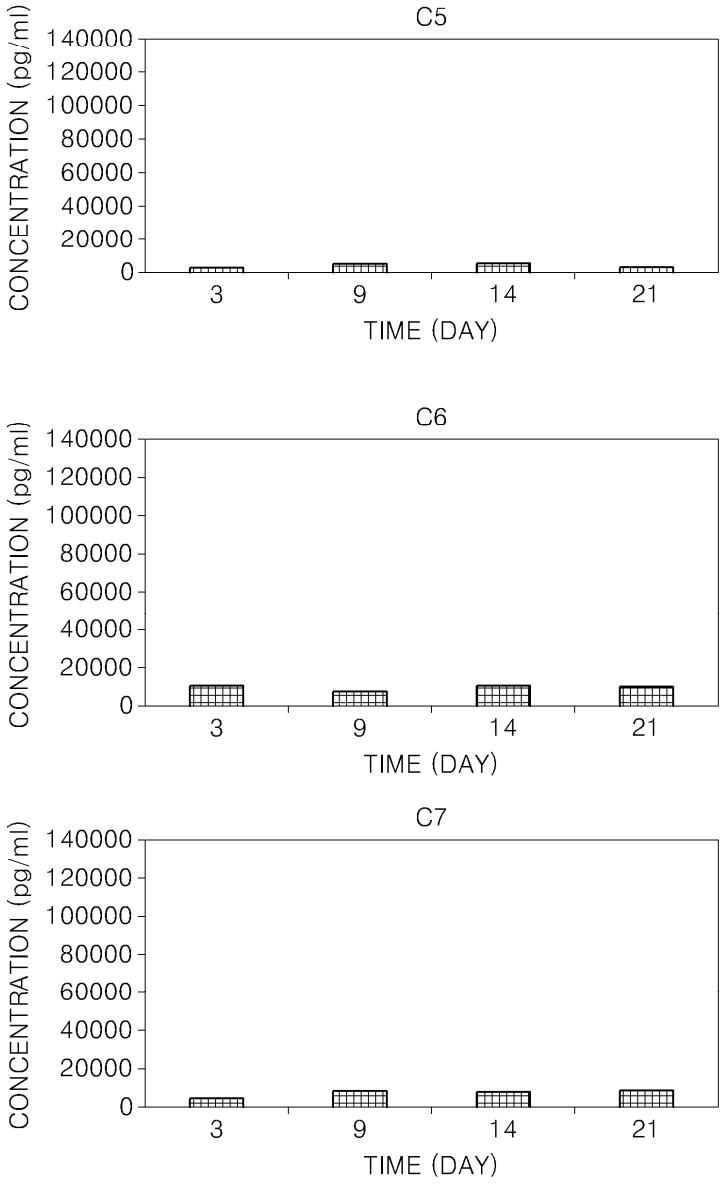

C5
CONCENTRATION (pg/ml)
140000
120000
100000
80000
60000
40000
20000
0
3
9
14
21
TIME (DAY)
C6
CONCENTRATION (pg/ml)
140000
120000
100000
80000
60000
40000
20000
0
3
9
14
21
TIME (DAY)
C7
CONCENTRATION (pg/ml)
140000
120000
100000
80000
60000
40000
20000
0
3
9
14
21
TIME (DAY)

FIG. 5

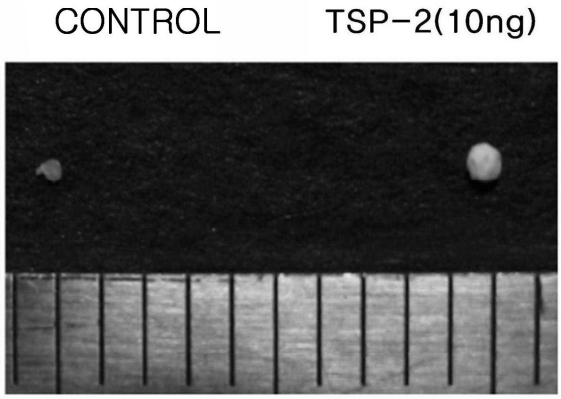


FIG. 6

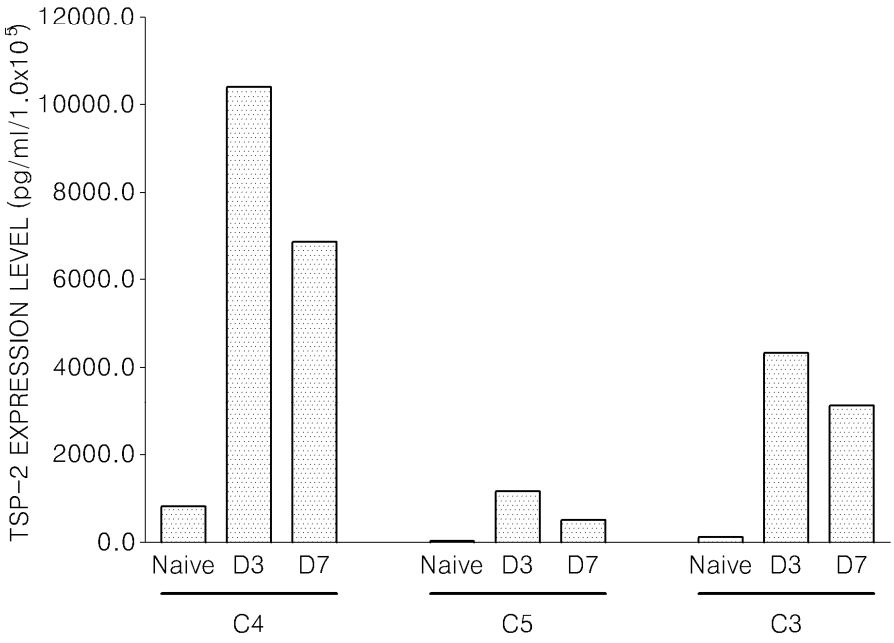

TSP-2 EXPRESSION LEVEL (pg/ml/1.0x10^5)
12000.0
10000.0
8000.0
6000.0
4000.0
2000.0
0.0
Naive
D3
D7
Naive
D3
D7
Naive
D3
D7
C4
C5
C3

FIG. 7

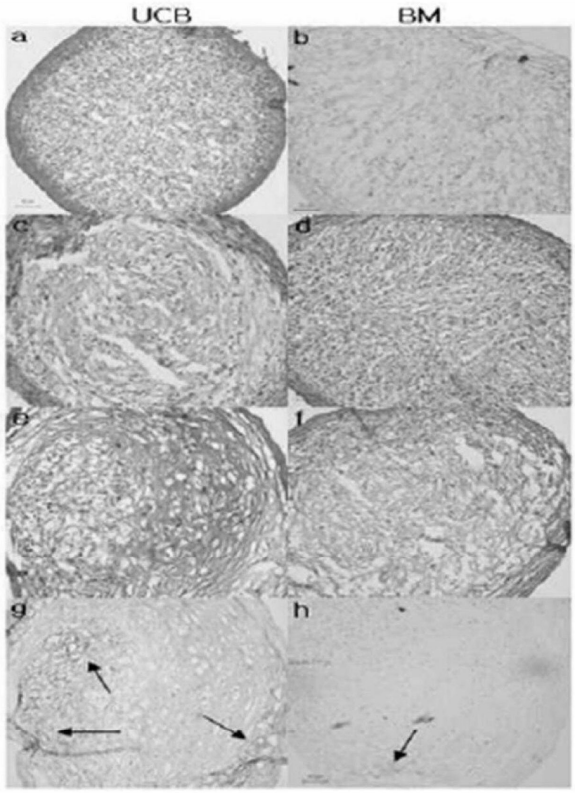


FIG. 8

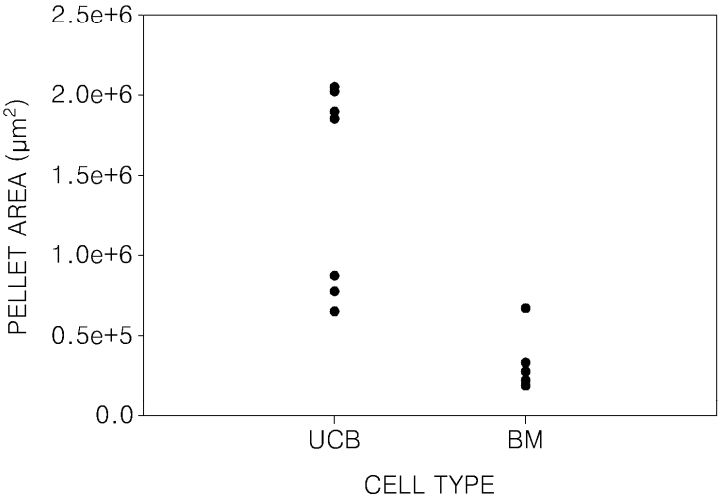


FIG. 9

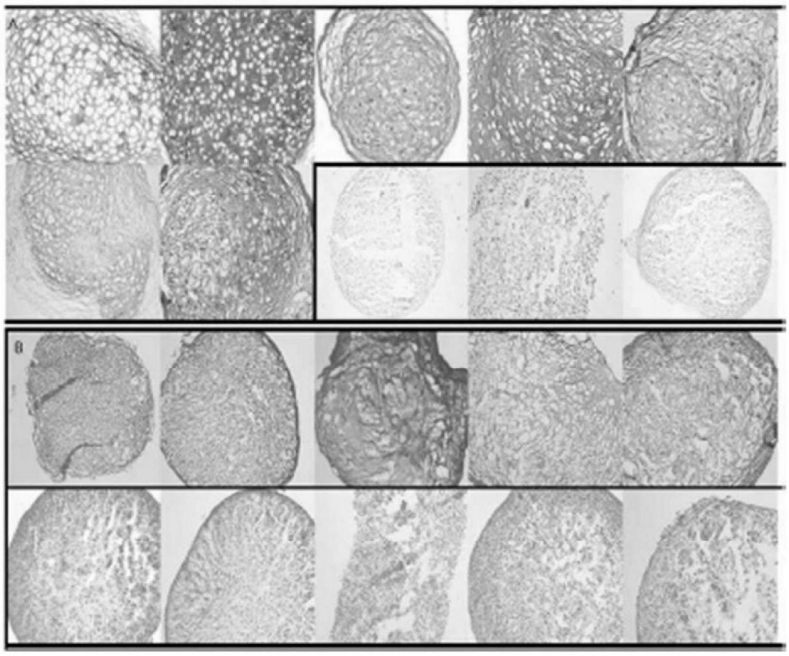


FIG. 10

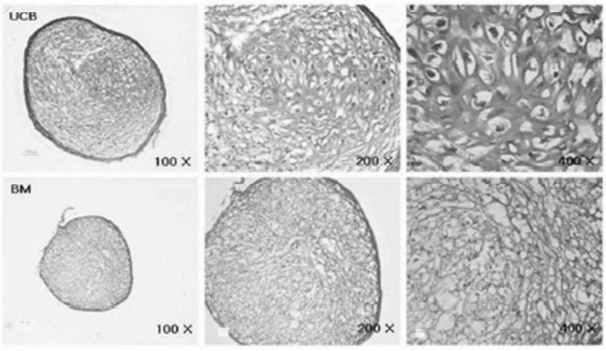


FIG. 11

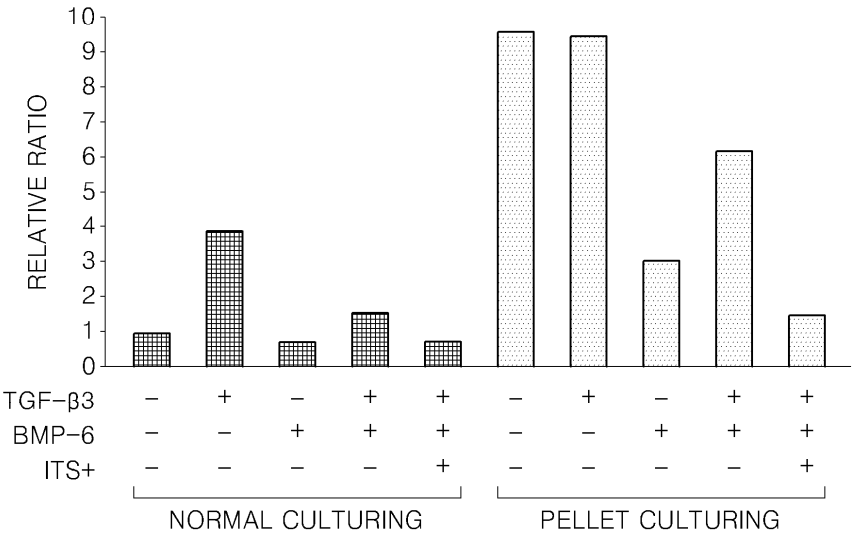

RELATIVE RATIO
10
9
8
7
6
5
4
3
2
1
0
TGF-β3 – + – + + – + – + +
BMP-6 – – + + + – – + + +
ITS+ – – – – + – – – – +
NORMAL CULTURING
PELLET CULTURING

FIG. 12

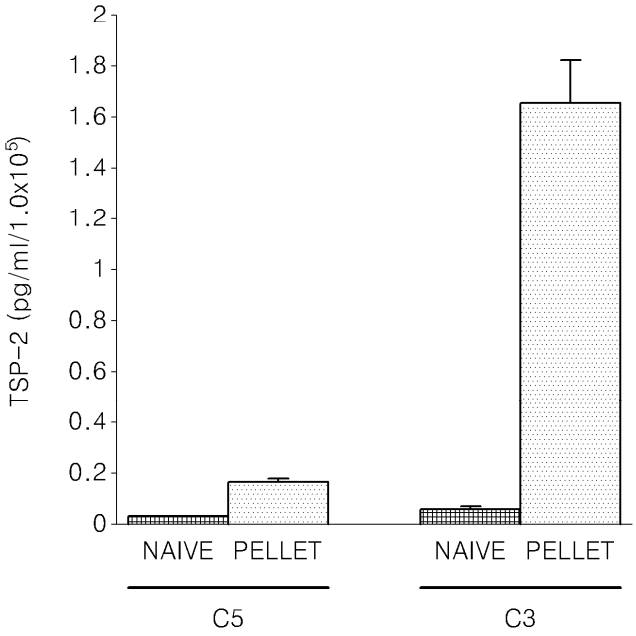

TSP-2 (pg/ml/1.0x10^5)
2
1.8
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
NAIVE
PELLET
NAIVE
PELLET
C5
C3

FIG. 13

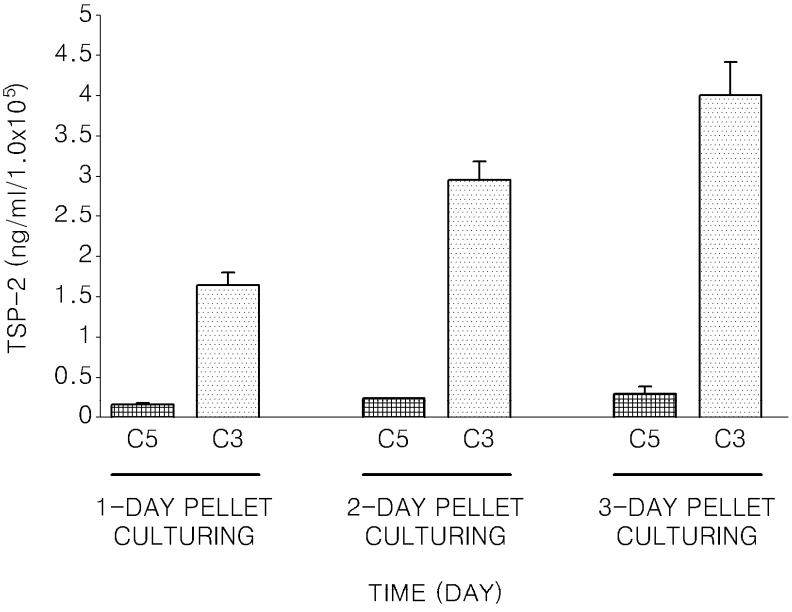

TSP-2 (ng/ml/1.0x10^5)
5
4.5
4
3.5
3
2.5
2
1.5
1
0.5
0
C5
C3
C5
C3
C5
C3
1-DAY PELLET CULTURING
2-DAY PELLET CULTURING
3-DAY PELLET CULTURING
TIME (DAY)

FIG. 14

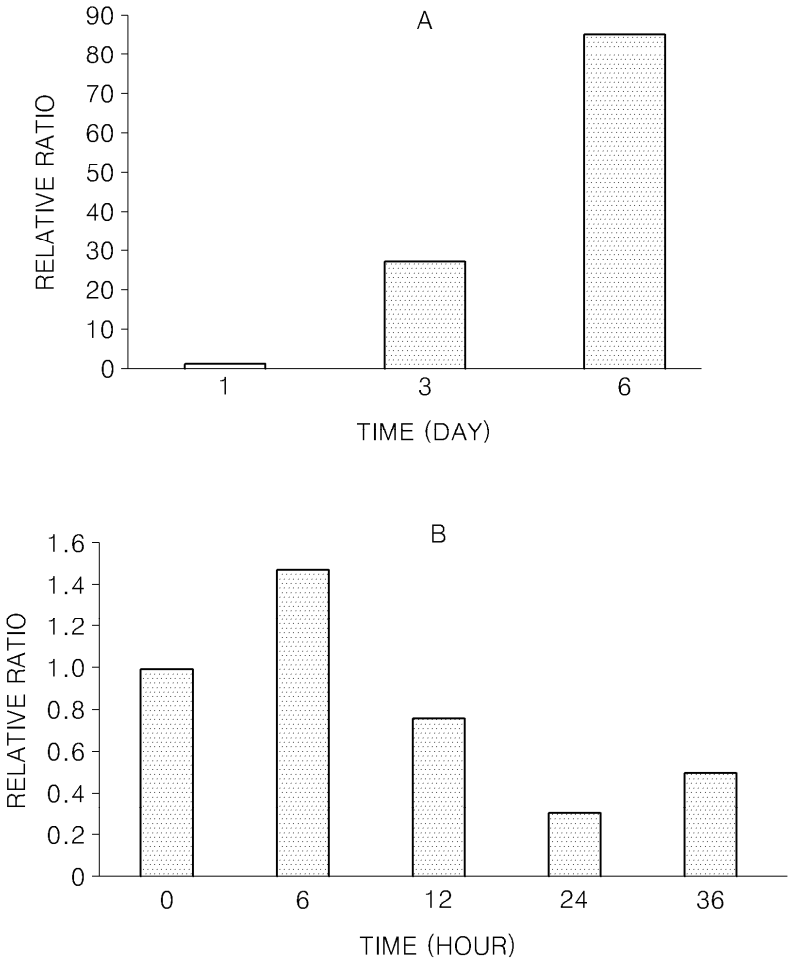

A
RELATIVE RATIO
90
80
70
60
50
40
30
20
10
0
1
3
6
TIME (DAY)
B
RELATIVE RATIO
1.6
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0
0
6
12
24
36
TIME (HOUR)

FIG. 15

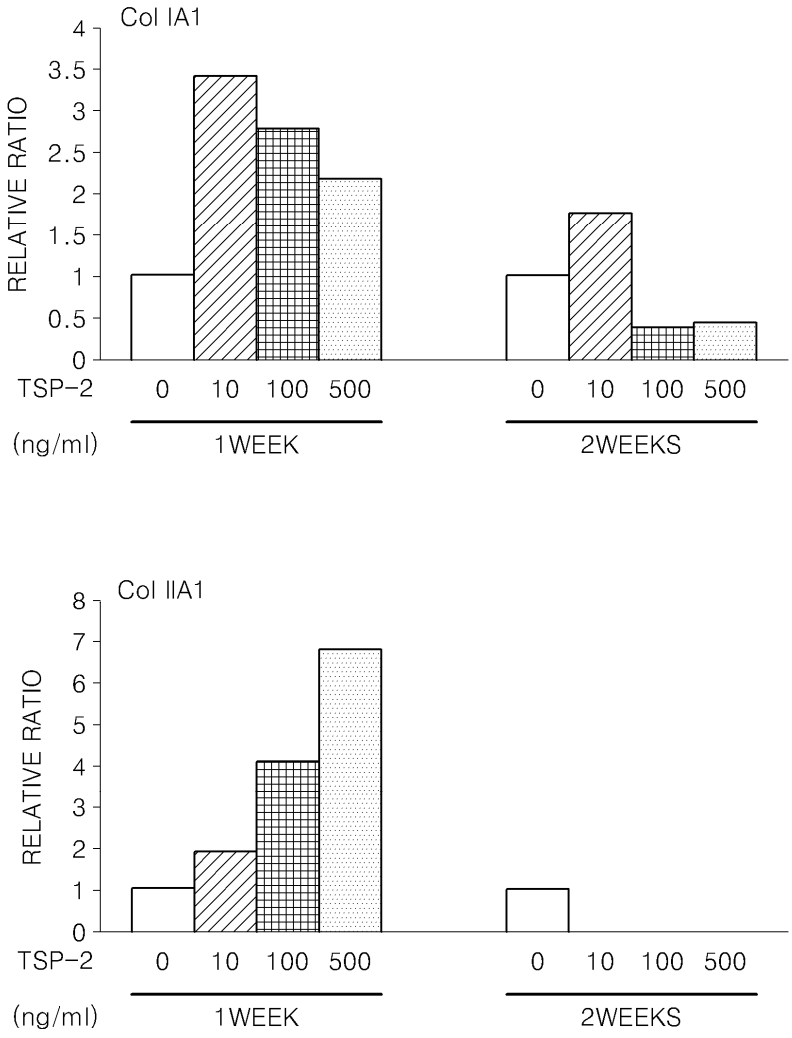

Col IA1
RELATIVE RATIO
4
3.5
3
2.5
2
1.5
1
0.5
0
TSP-2
0
10
100
500
0
10
100
500
(ng/ml)
1WEEK
2WEEKS
Col IIA1
RELATIVE RATIO
8
7
6
5
4
3
2
1
0
TSP-2
0
10
100
500
0
10
100
500
(ng/ml)
1WEEK
2WEEKS

FIG. 16

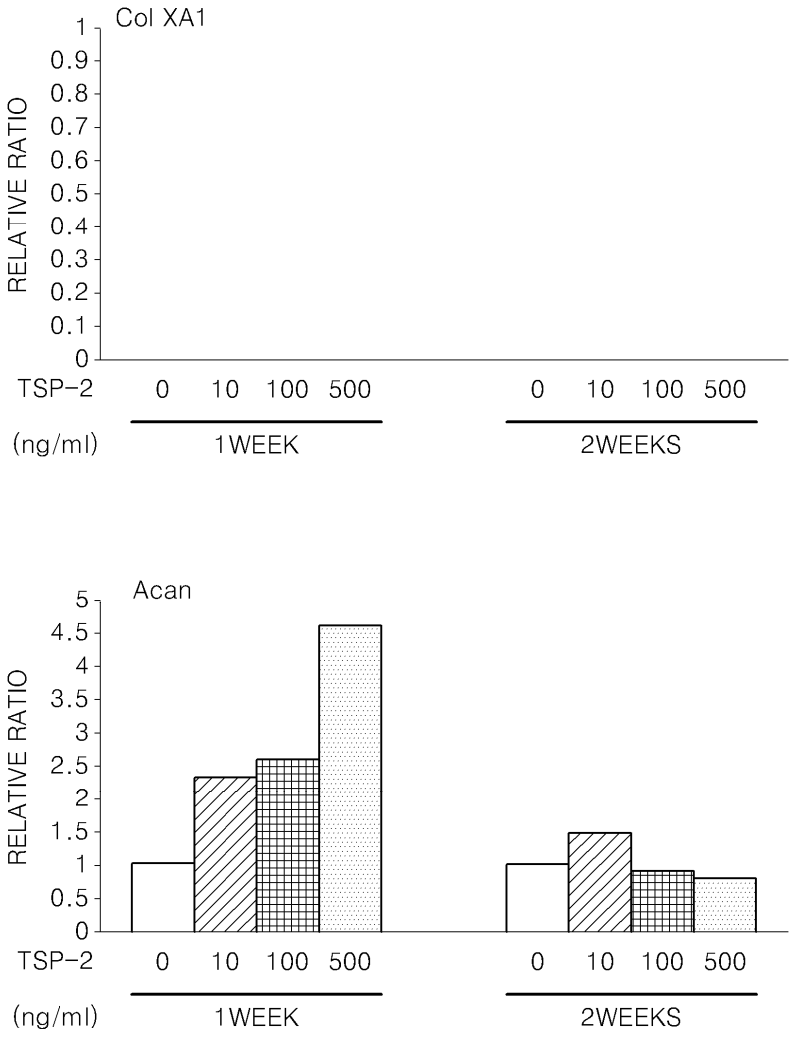

Col XA1
RELATIVE RATIO
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
TSP-2
0 10 100 500
0 10 100 500
(ng/ml)
1WEEK
2WEEKS
Acan
RELATIVE RATIO
5
4.5
4
3.5
3
2.5
2
1.5
1
0.5
0
TSP-2
0 10 100 500
0 10 100 500
(ng/ml)
1WEEK
2WEEKS

FIG. 17

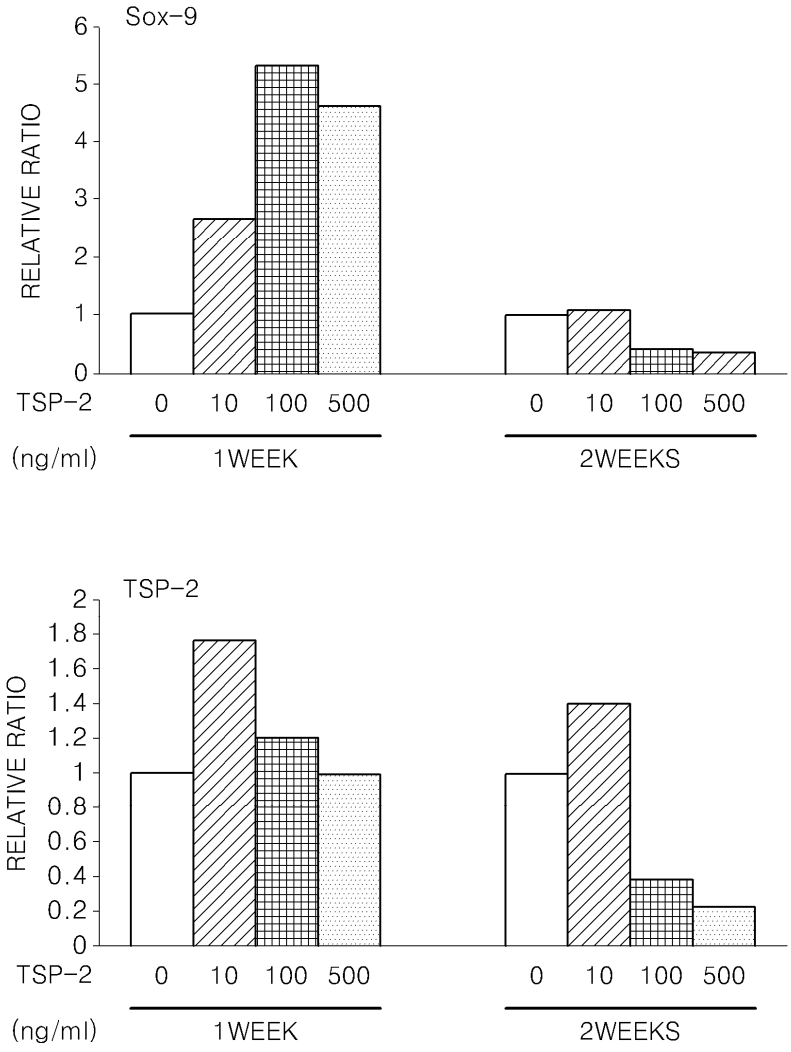

Sox-9
RELATIVE RATIO
6
5
4
3
2
1
0
TSP-2
0
10
100
500
0
10
100
500
(ng/ml)
1WEEK
2WEEKS
TSP-2
RELATIVE RATIO
2
1.8
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
TSP-2
0
10
100
500
0
10
100
500
(ng/ml)
1WEEK
2WEEKS

FIG. 18

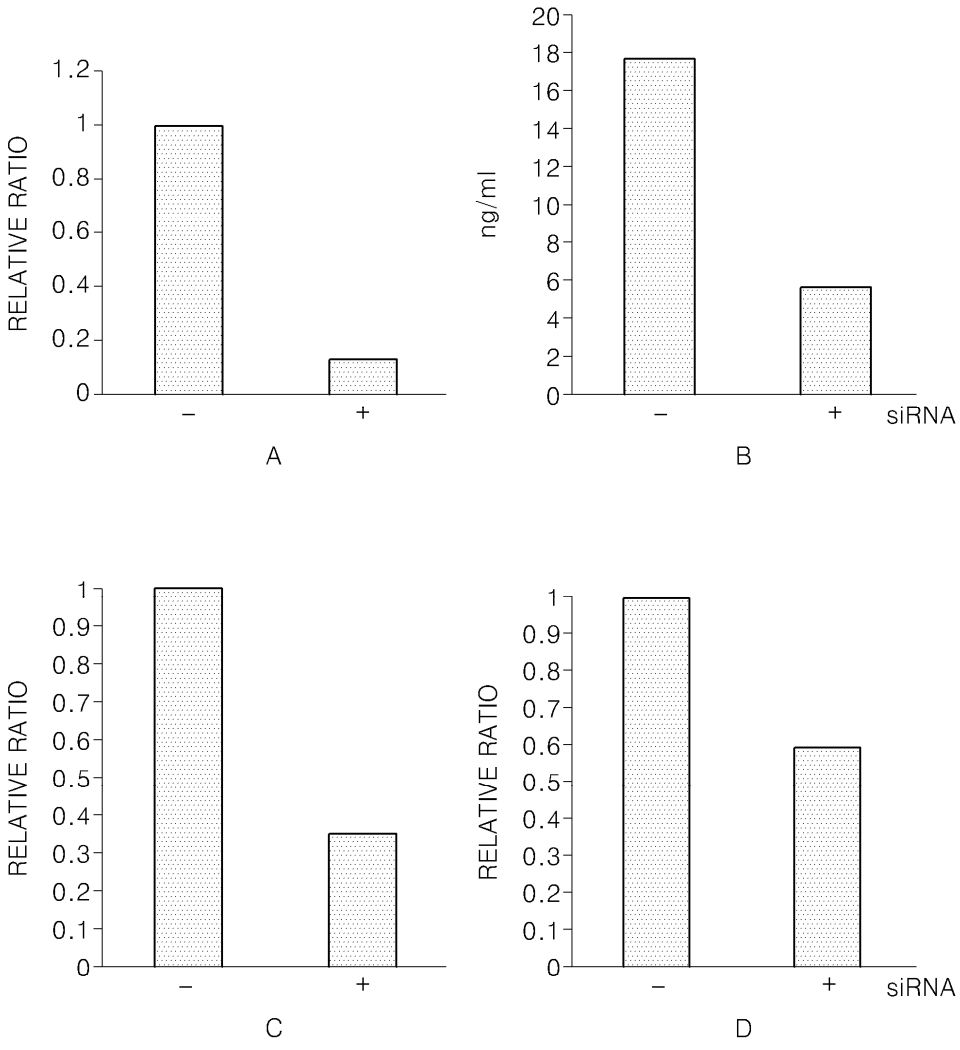

RELATIVE RATIO
1.2
1
0.8
0.6
0.4
0.2
0
–
+
A
ng/ml
20
18
16
14
12
10
8
6
4
2
0
–
+
siRNA
B
RELATIVE RATIO
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
–
+
C
RELATIVE RATIO
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
–
+
siRNA
D

FIG. 19

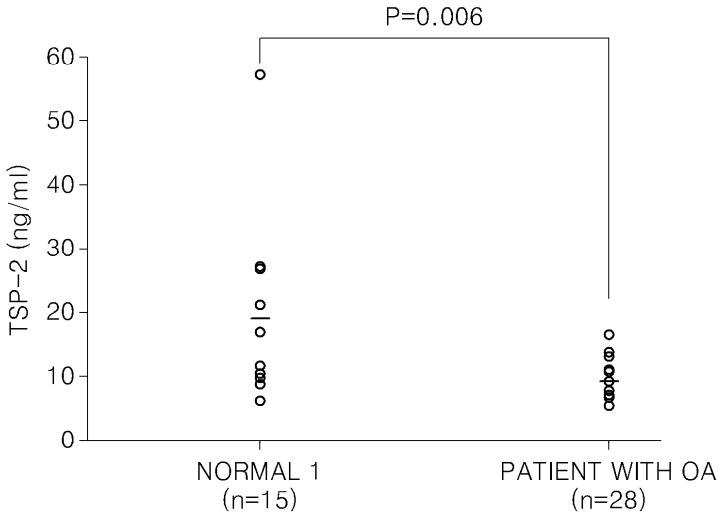

P=0.006
TSP-2 (ng/ml)
60
50
40
30
20
10
0
NORMAL 1
(n=15)
PATIENT WITH OA
(n=28)

FIG. 20

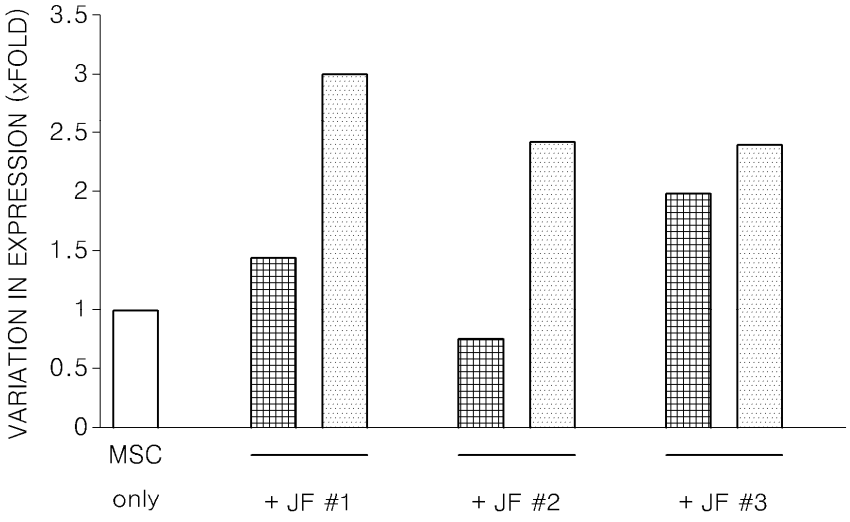

VARIATION IN EXPRESSION (xFOLD)
3.5
3
2.5
2
1.5
1
0.5
0
MSC
only
+ JF #1
+ JF #2
+ JF #3

FIG. 21

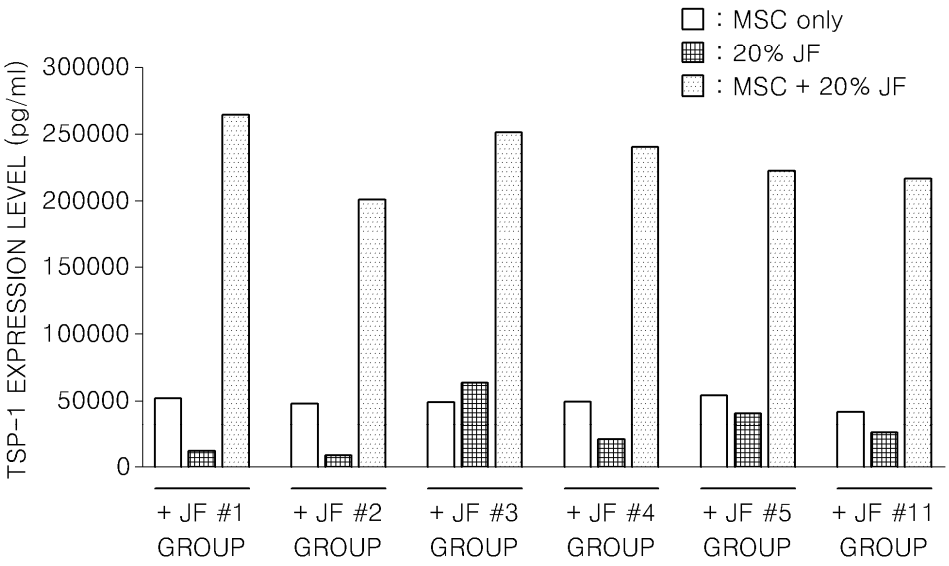

: MSC only
: 20% JF
: MSC + 20% JF
TSP-1 EXPRESSION LEVEL (pg/ml)
300000
250000
200000
150000
100000
50000
0
+ JF #1 GROUP
+ JF #2 GROUP
+ JF #3 GROUP
+ JF #4 GROUP
+ JF #5 GROUP
+ JF #11 GROUP

FIG. 22

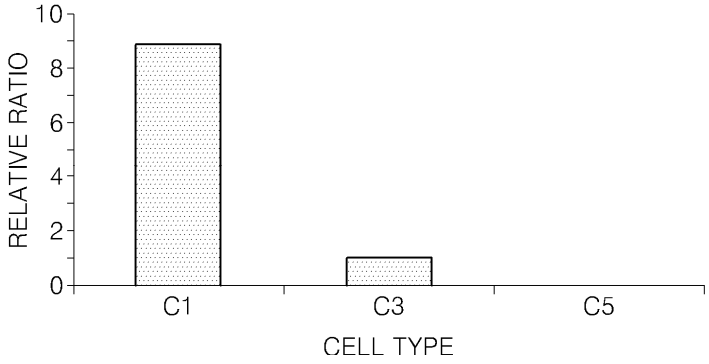

RELATIVE RATIO
10
8
6
4
2
0
C1
C3
C5
CELL TYPE

FIG. 23

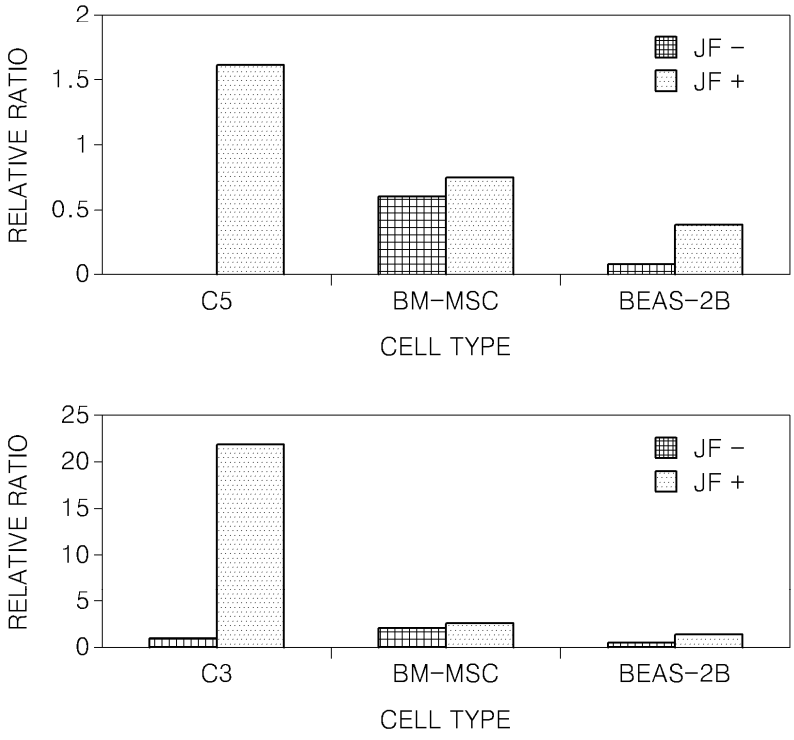

RELATIVE RATIO
2
1.5
1
0.5
0
JF -
JF +
C5
BM-MSC
BEAS-2B
CELL TYPE
RELATIVE RATIO
25
20
15
10
5
0
JF -
JF +
C3
BM-MSC
BEAS-2B
CELL TYPE

FIG. 24

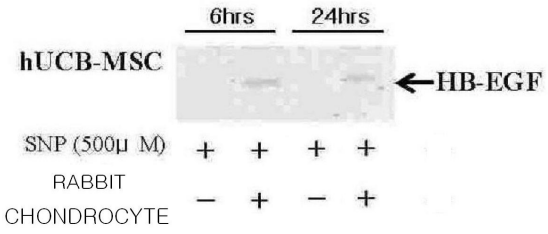


FIG. 25

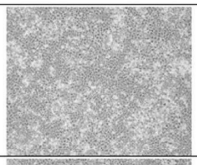
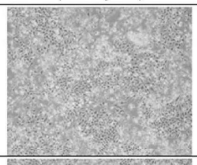
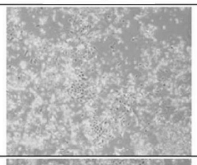
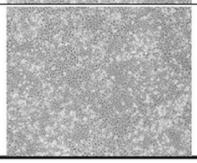
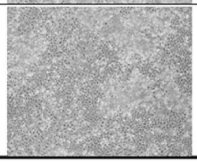
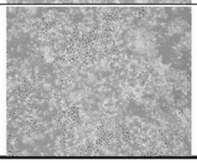
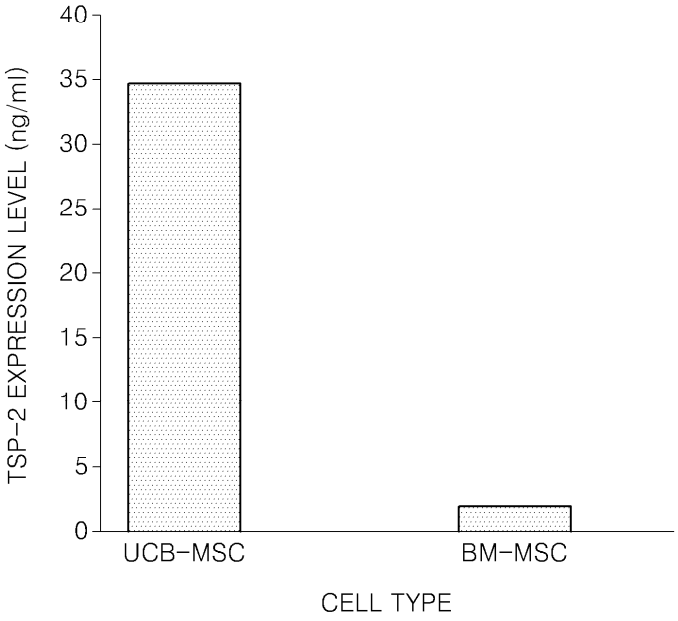
	-SNP	+SNP (500μM)	+SNP (750μM)
CHONDROCYTE			
CHONDROCYTE (with HB-EGF : 50ng/ml)			

FIG. 26


40
35
30
25
20
15
10
5
0
TSP-2 EXPRESSION LEVEL (ng/ml)
UCB-MSC
BM-MSC
CELL TYPE