FIG. 1

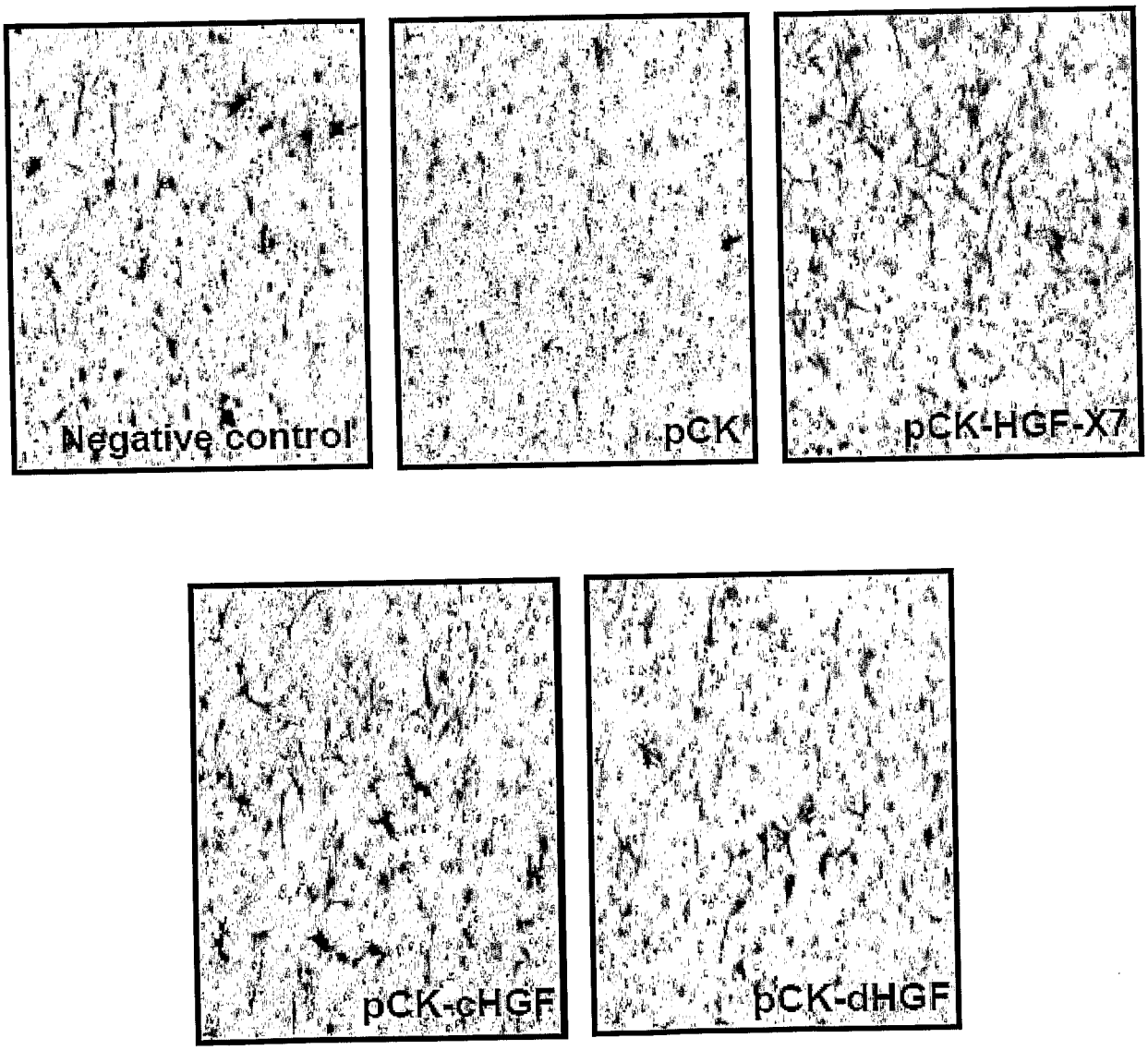


FIG. 1 (continued)

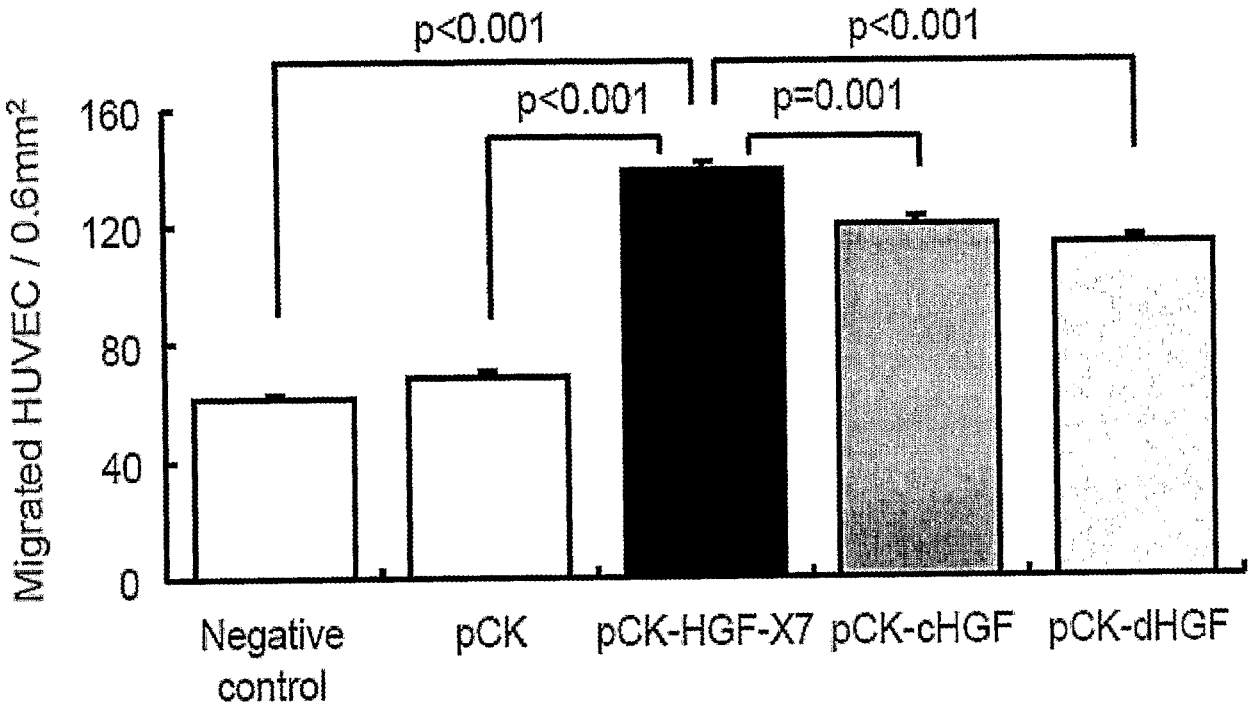


FIG. 2

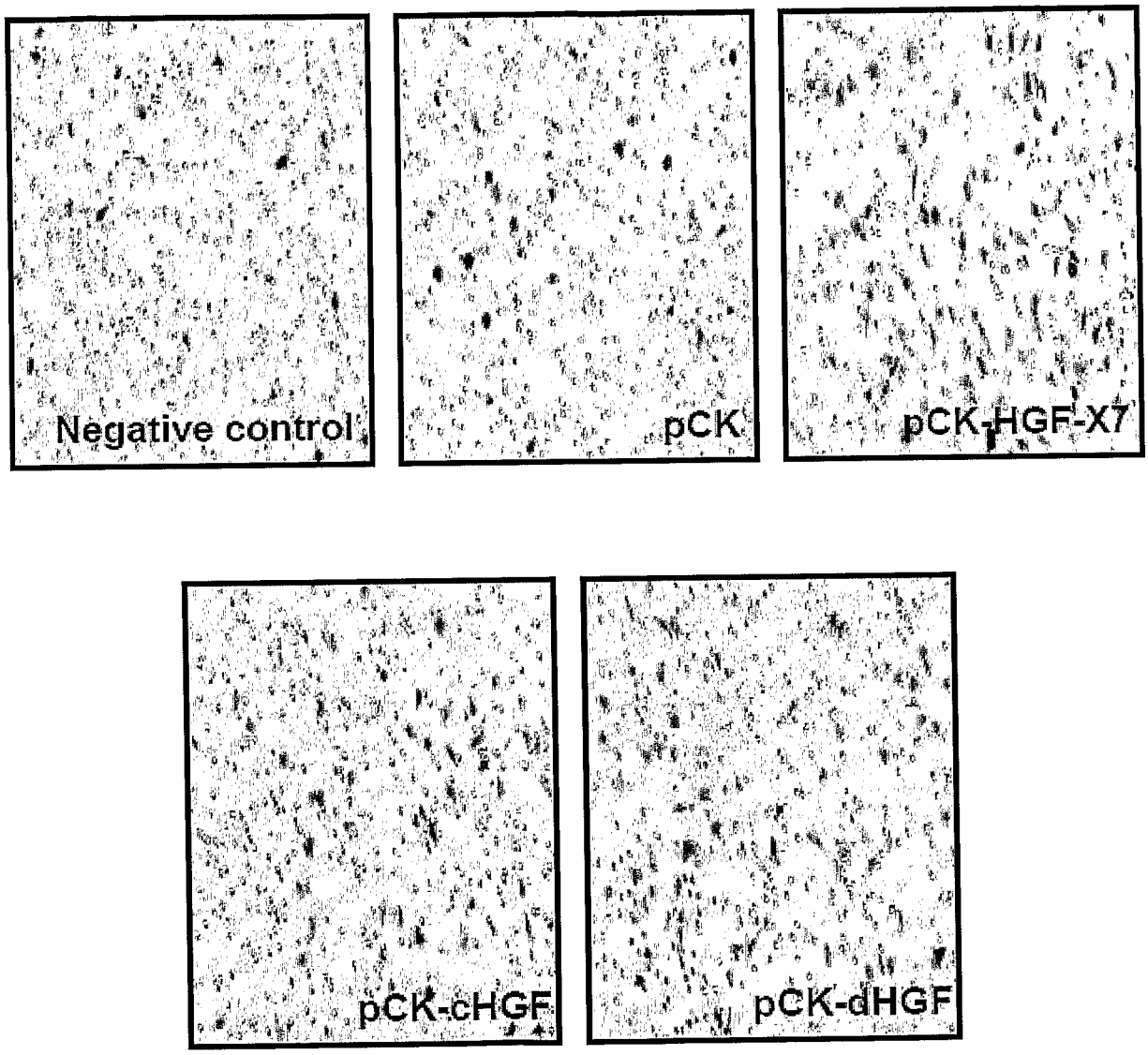


FIG. 2 (continued)

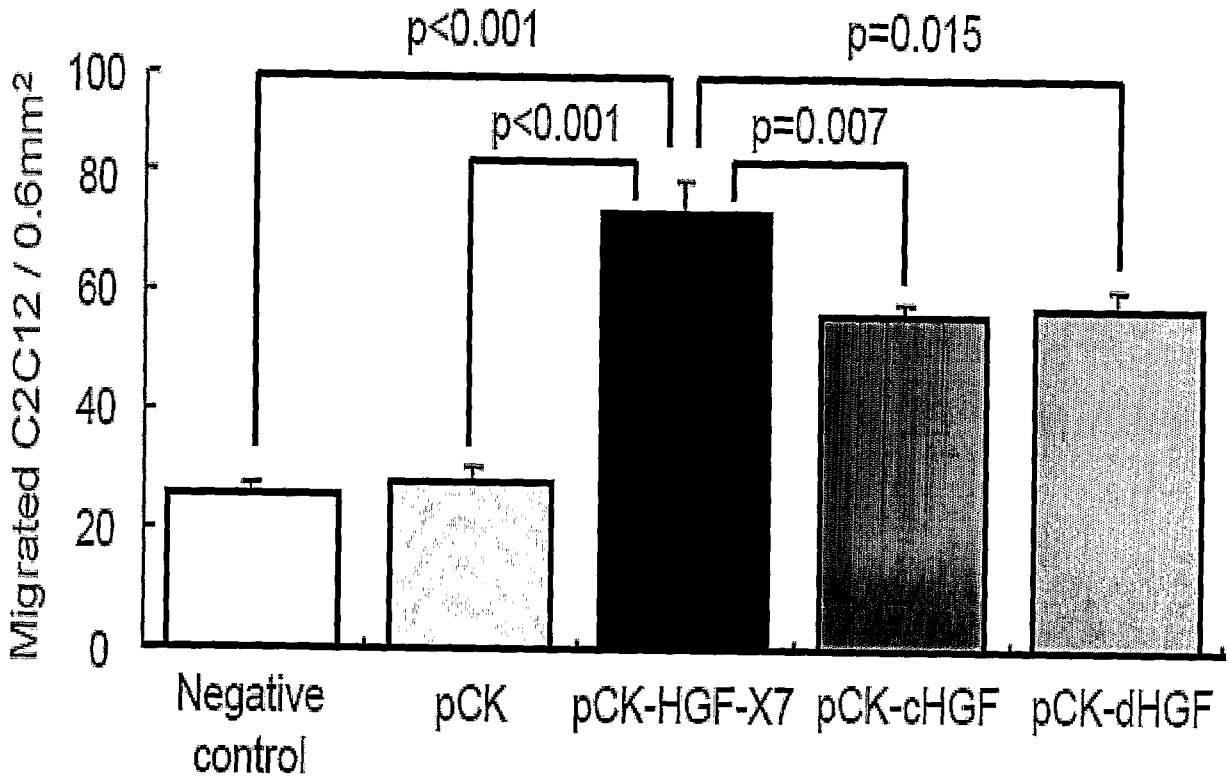


FIG. 3

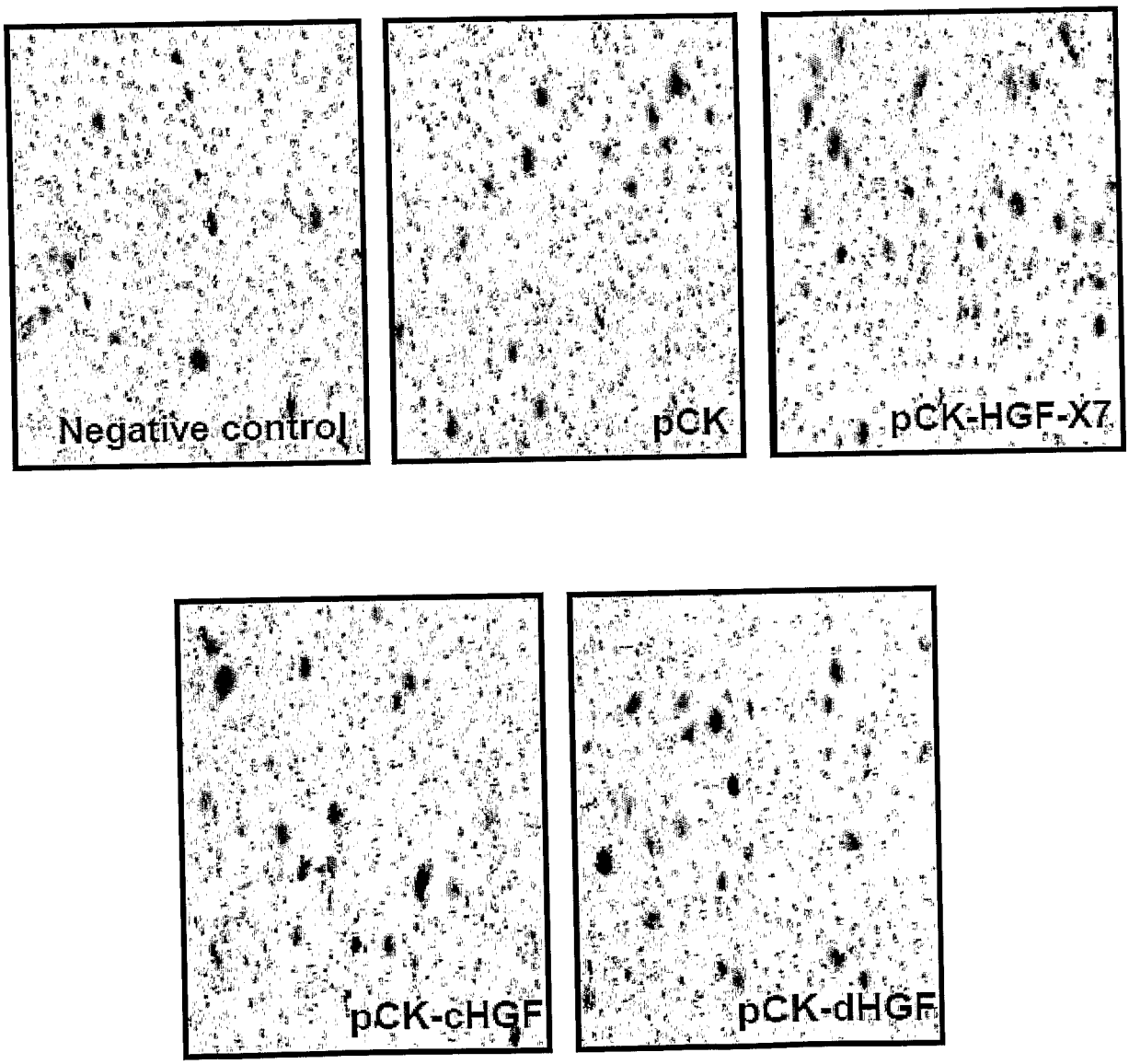


FIG. 3 (continued)

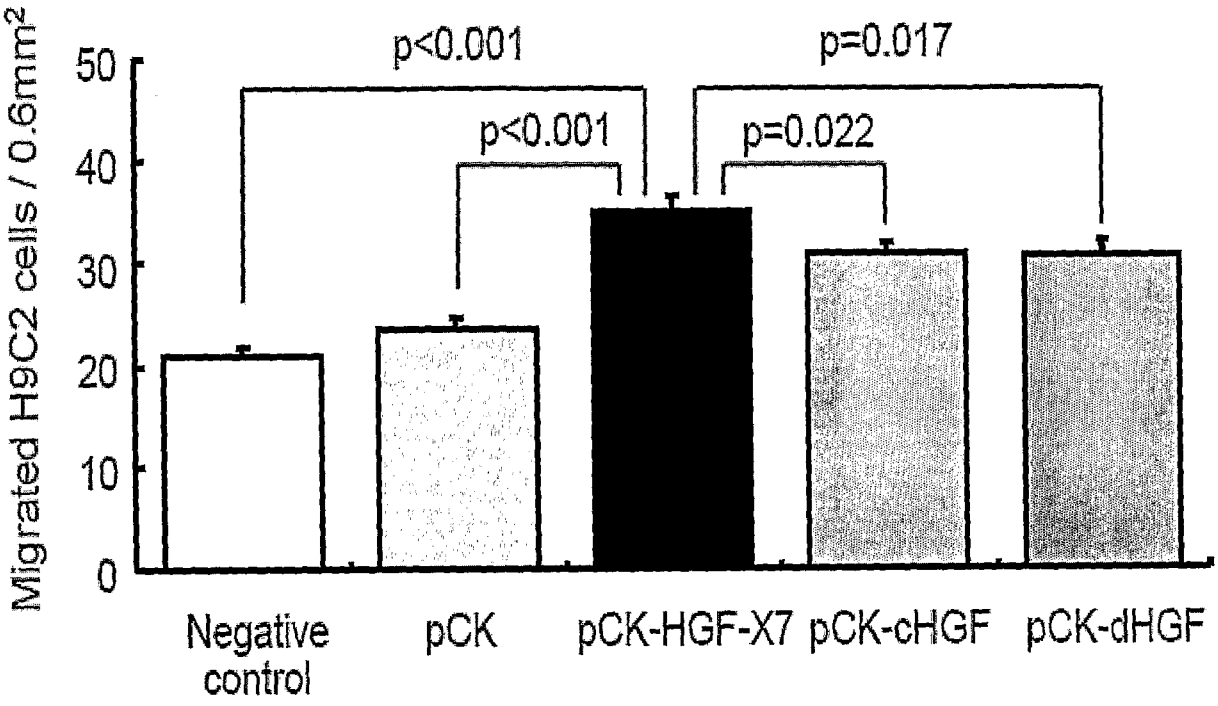


FIG. 4

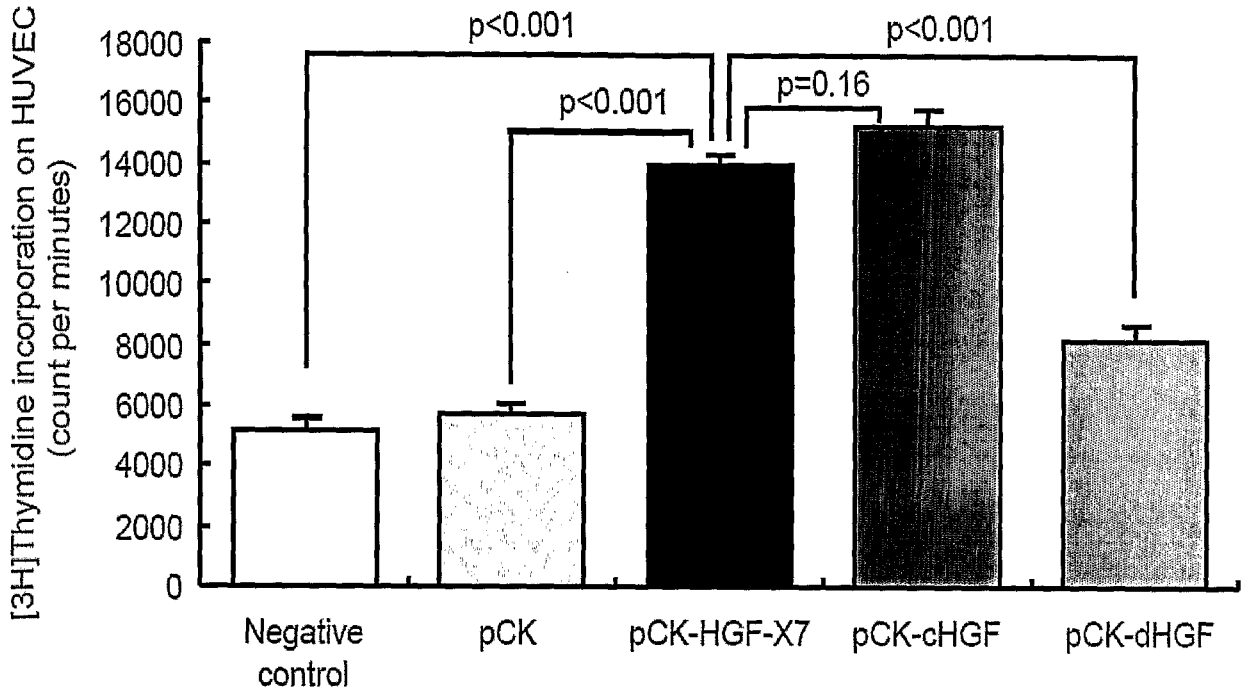

[3H]Thymidine incorporation on HUVEC (count per minutes)
18000
16000
14000
12000
10000
8000
6000
4000
2000
0
p<0.001
p<0.001
p<0.001
p=0.16
Negative control
pCK
pCK-HGF-X7
pCK-cHGF
pCK-dHGF

FIG. 5

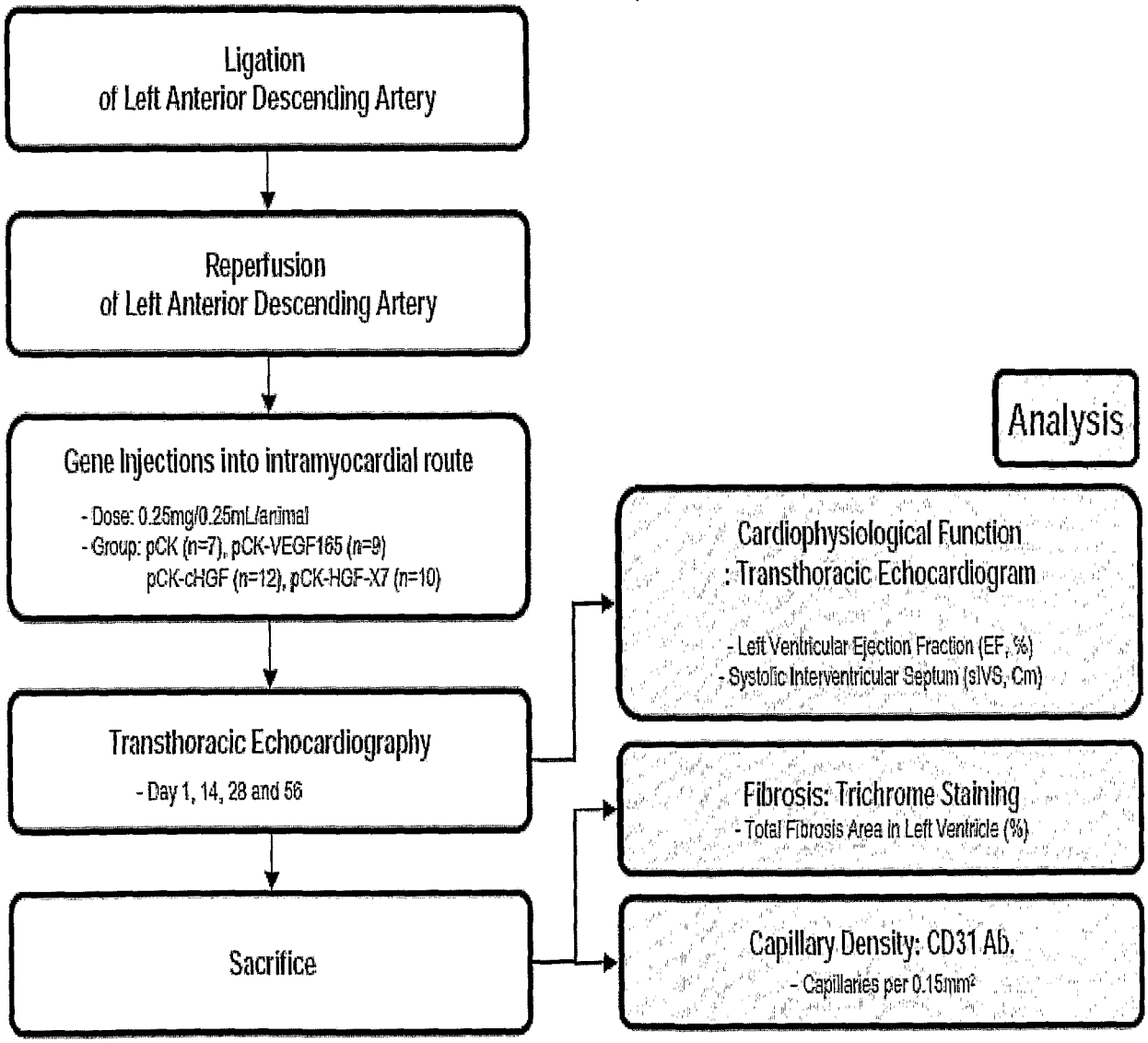

Ligation
of Left Anterior Descending Artery
Reperfusion
of Left Anterior Descending Artery
Gene Injections into intramyocardial route
- Dose: 0.25mg/0.25mL/animal
- Group: pCK (n=7), pCK-VEGF165 (n=9)
pCK-cHGF (n=12), pCK-HGF-X7 (n=10)
Transthoracic Echocardiography
- Day 1, 14, 28 and 56
Sacrifice
Analysis
Cardiophysiological Function
: Transthoracic Echocardiogram
- Left Ventricular Ejection Fraction (EF, %)
- Systolic Interventricular Septum (sIVS, Cm)
Fibrosis: Trichrome Staining
- Total Fibrosis Area in Left Ventricle (%)
Capillary Density: CD31 Ab.
- Capillaries per 0.15mm²

FIG. 6

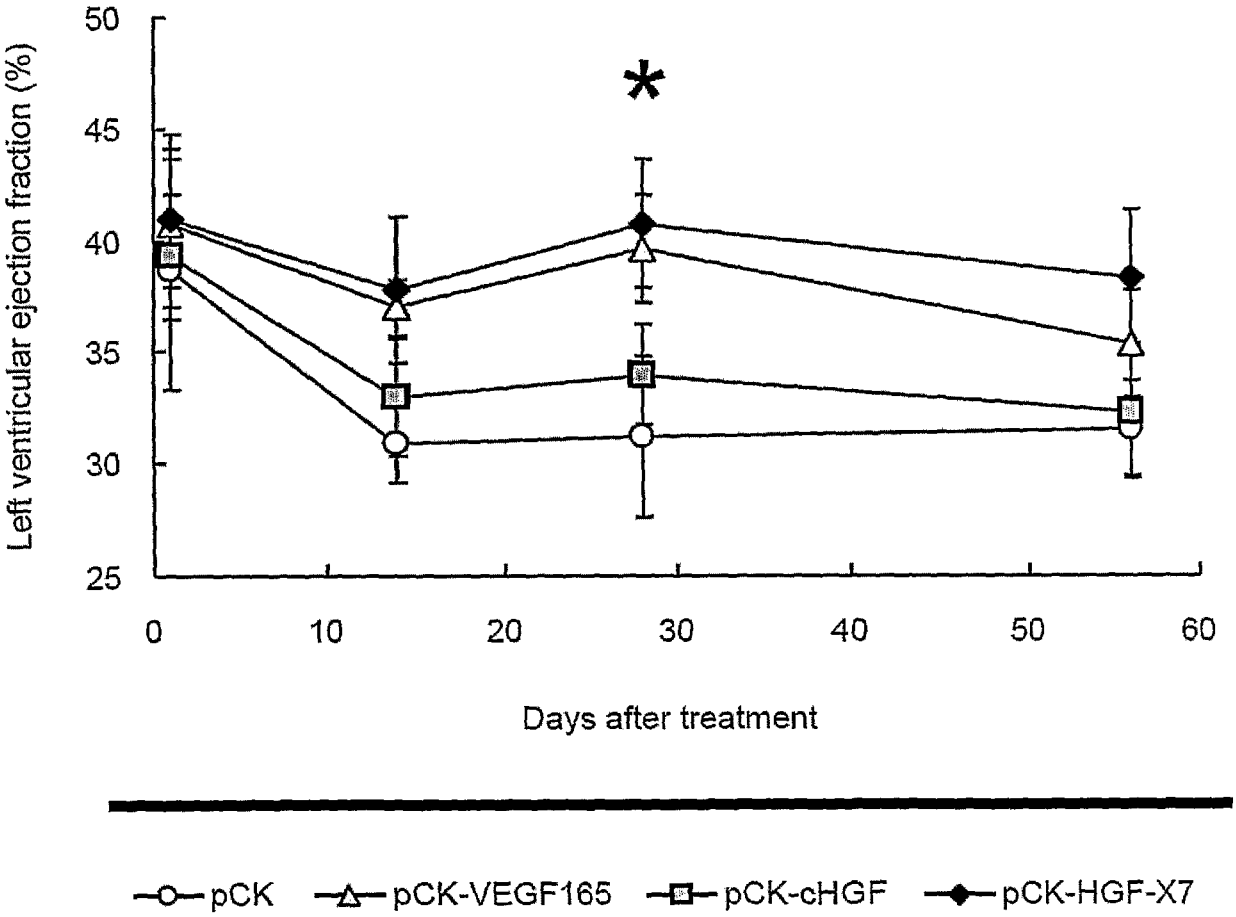

Left ventricular ejection fraction (%)
50
45
40
35
30
25
*
0
10
20
30
40
50
60
Days after treatment
pCK
pCK-VEGF165
pCK-cHGF
pCK-HGF-X7

FIG. 7

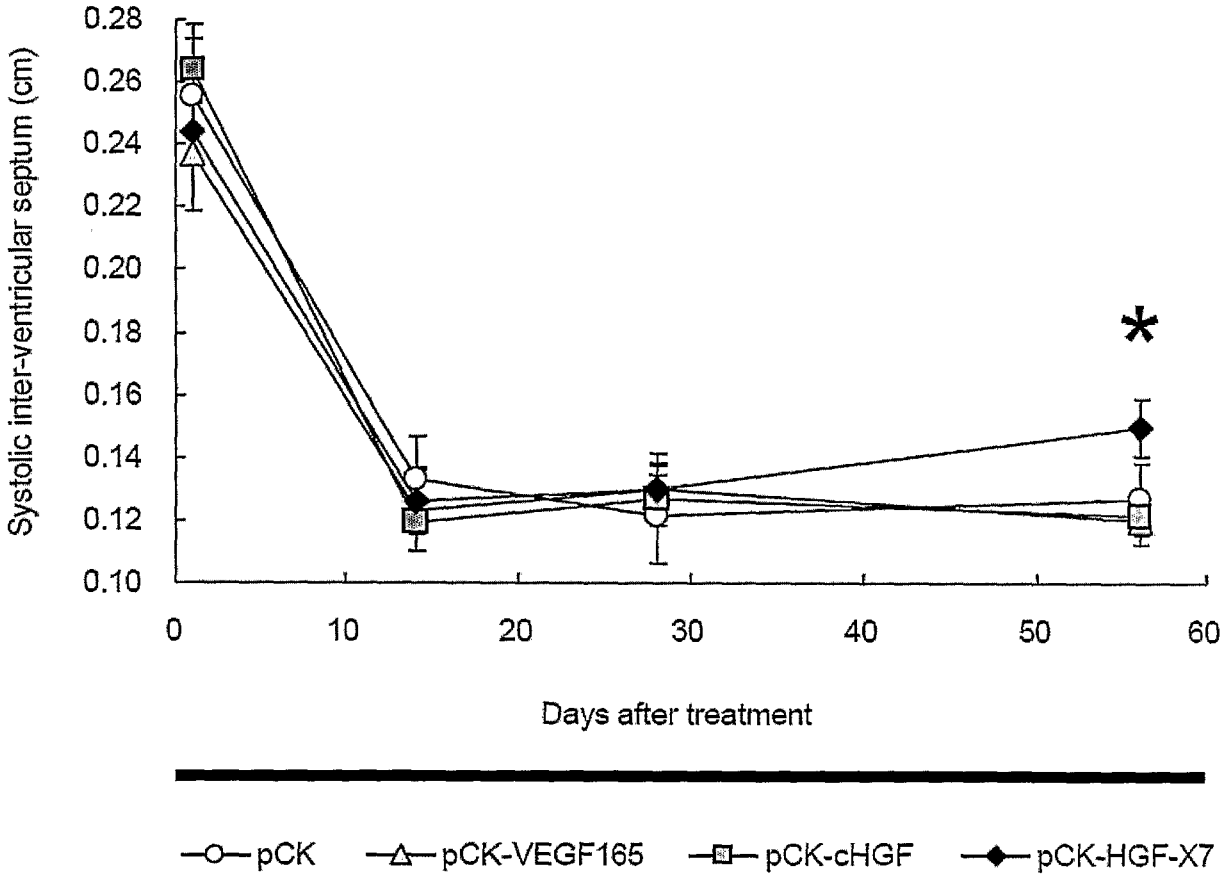

Systolic inter-ventricular septum (cm)
0.28
0.26
0.24
0.22
0.20
0.18
0.16
0.14
0.12
0.10
0
10
20
30
40
50
60
*
Days after treatment
pCK
pCK-VEGF165
pCK-cHGF
pCK-HGF-X7

FIG. 8

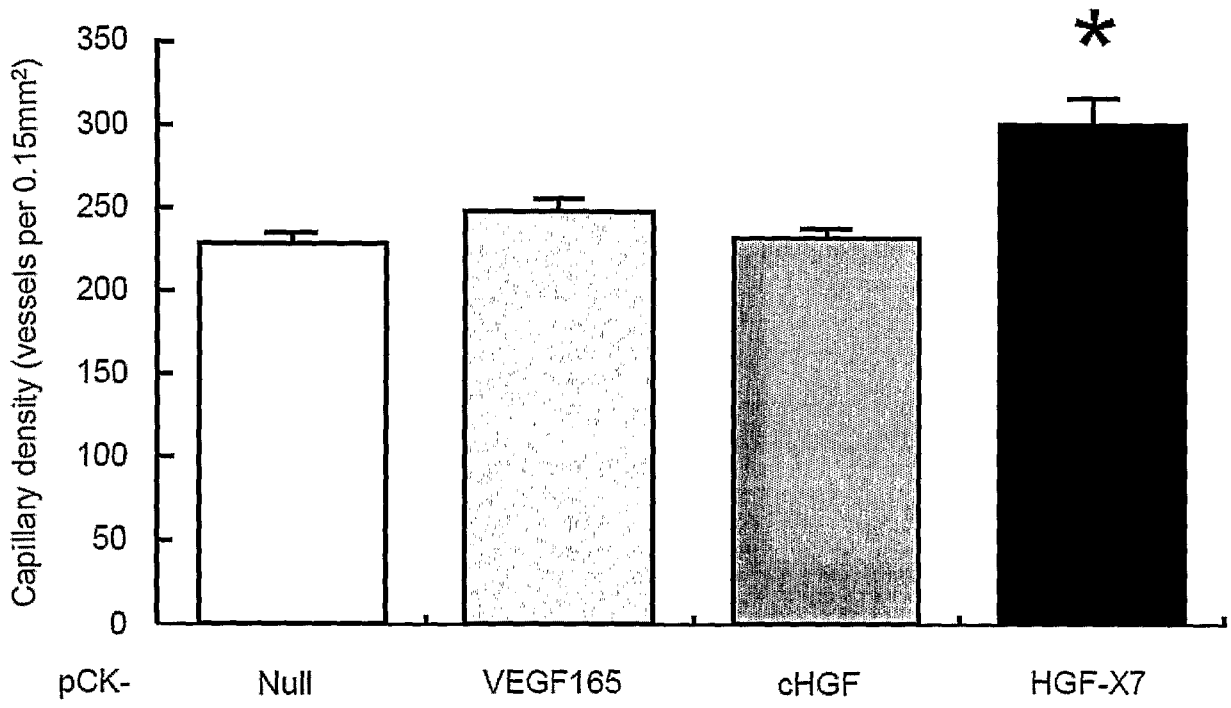

Capillary density (vessels per 0.15mm²)
350
300
250
200
150
100
50
0
*
pCK-
Null
VEGF165
cHGF
HGF-X7

FIG. 9

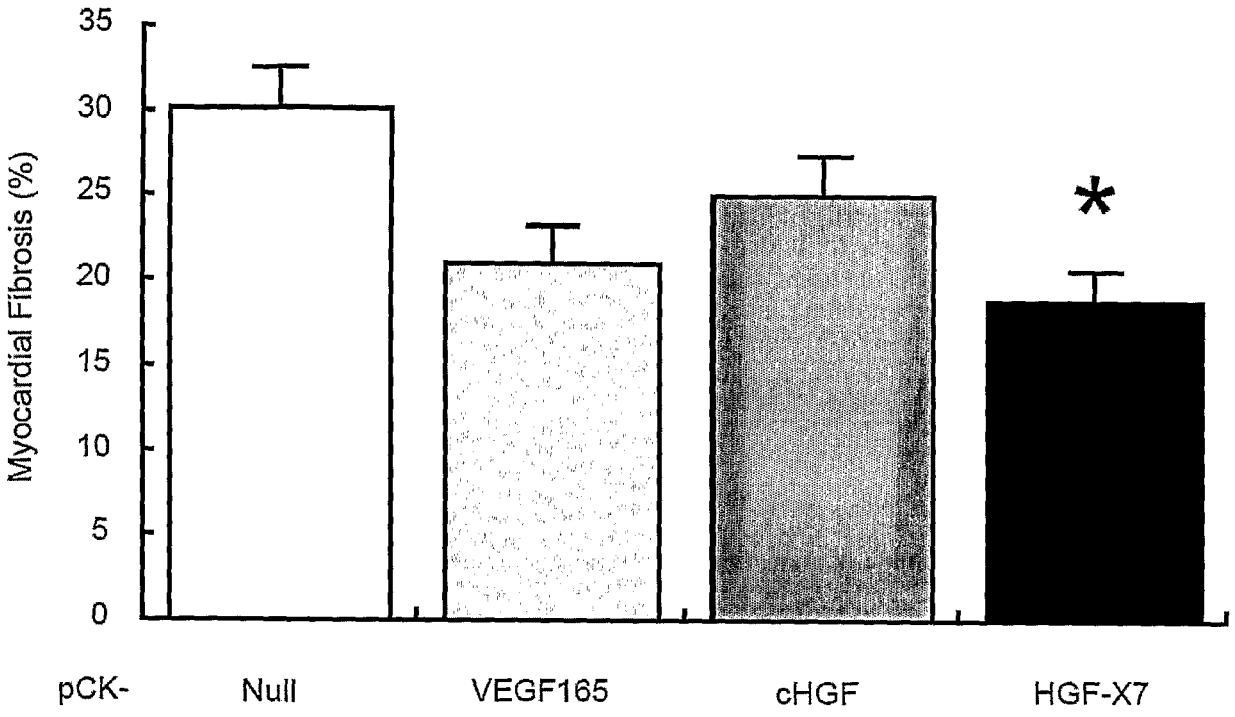

Myocardial Fibrosis (%)
35
30
25
20
15
10
5
0
*
pCK-
Null
VEGF165
cHGF
HGF-X7

FIG. 10

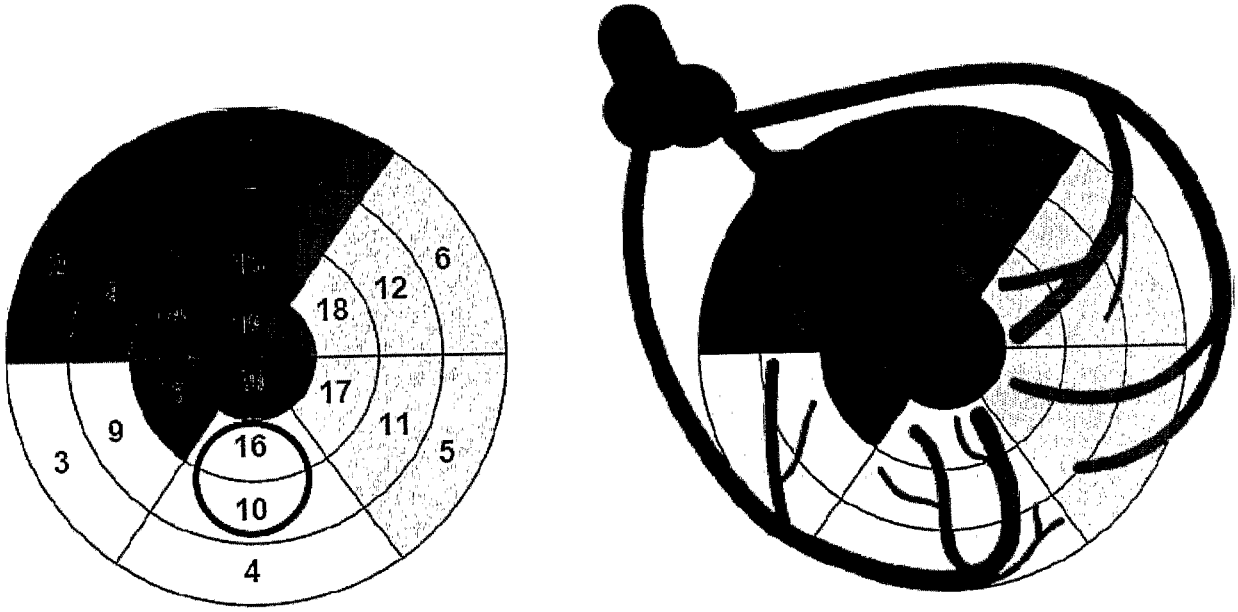
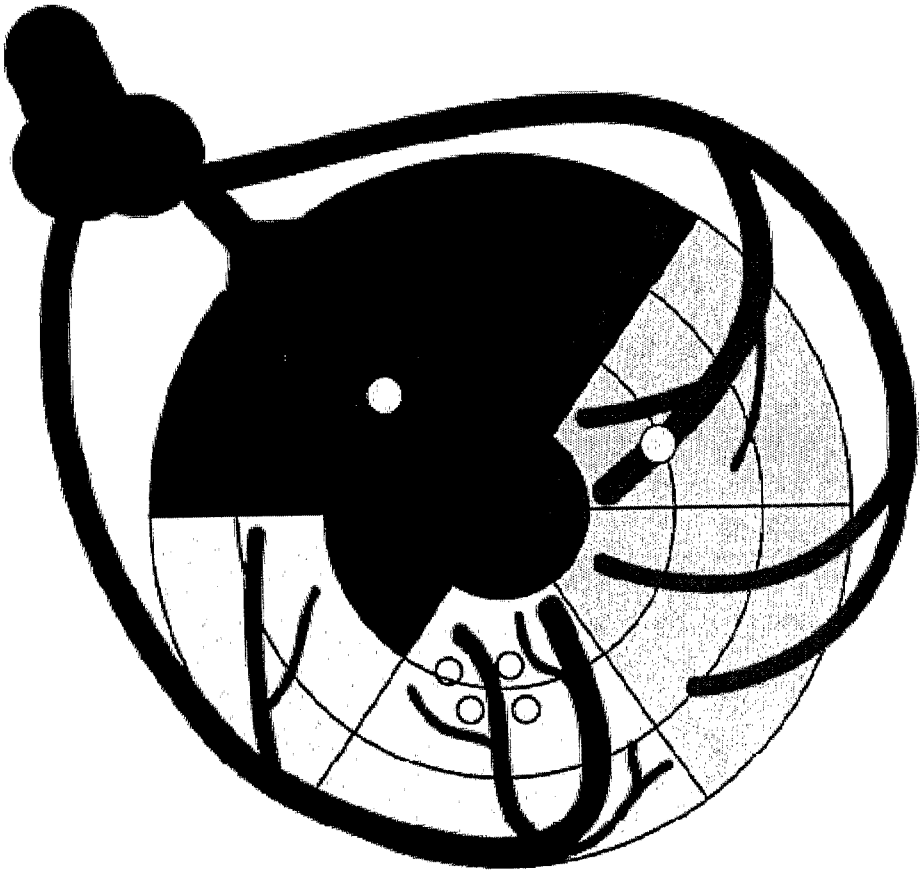

6
12
18
17
11
5
9
3
16
10
4
Left anterior descending artery (LAD)
Left circumflex artery (LCX)
Right coronary artery (RCA)

FIG. 11



Injection point

CABG

FIG. 12

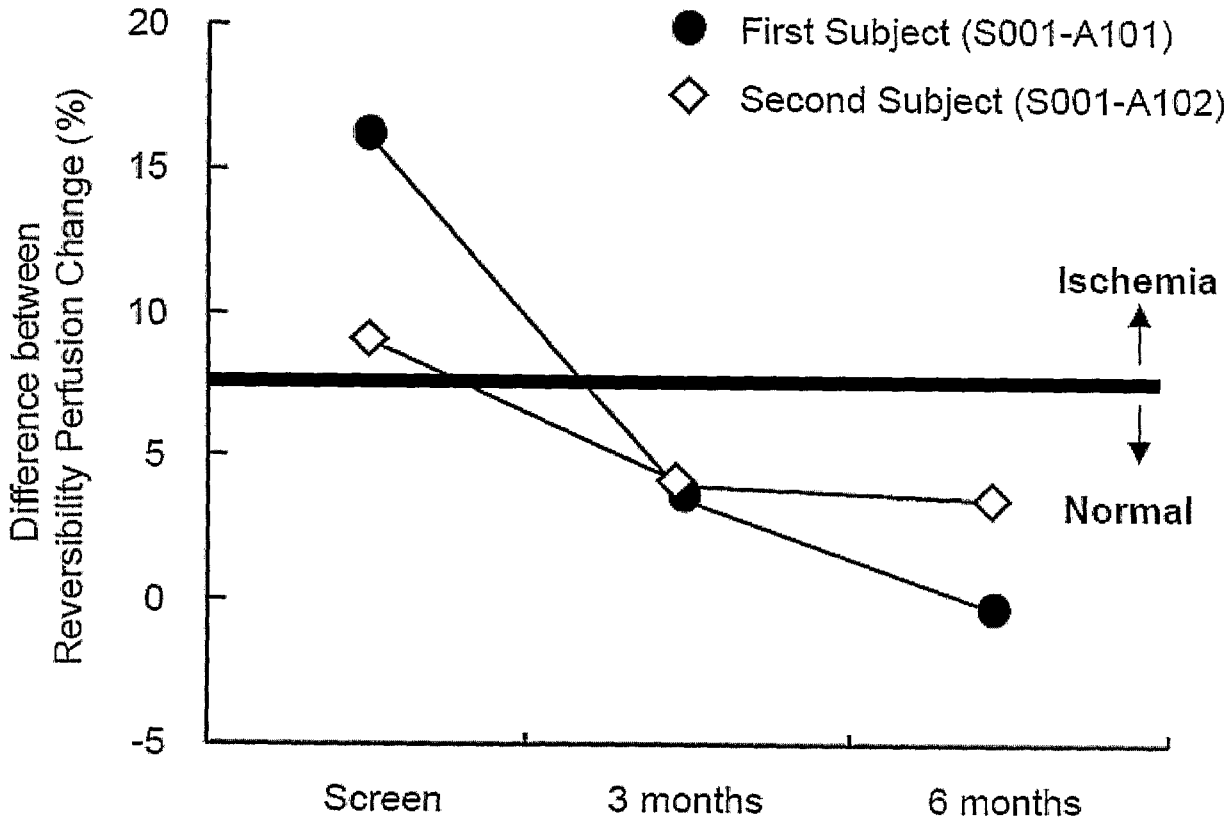

First Subject (S001-A101)
Second Subject (S001-A102)
Difference between Reversibility Perfusion Change (%)
20
15
10
5
0
-5
Ischemia
Normal
Screen
3 months
6 months

FIG. 13

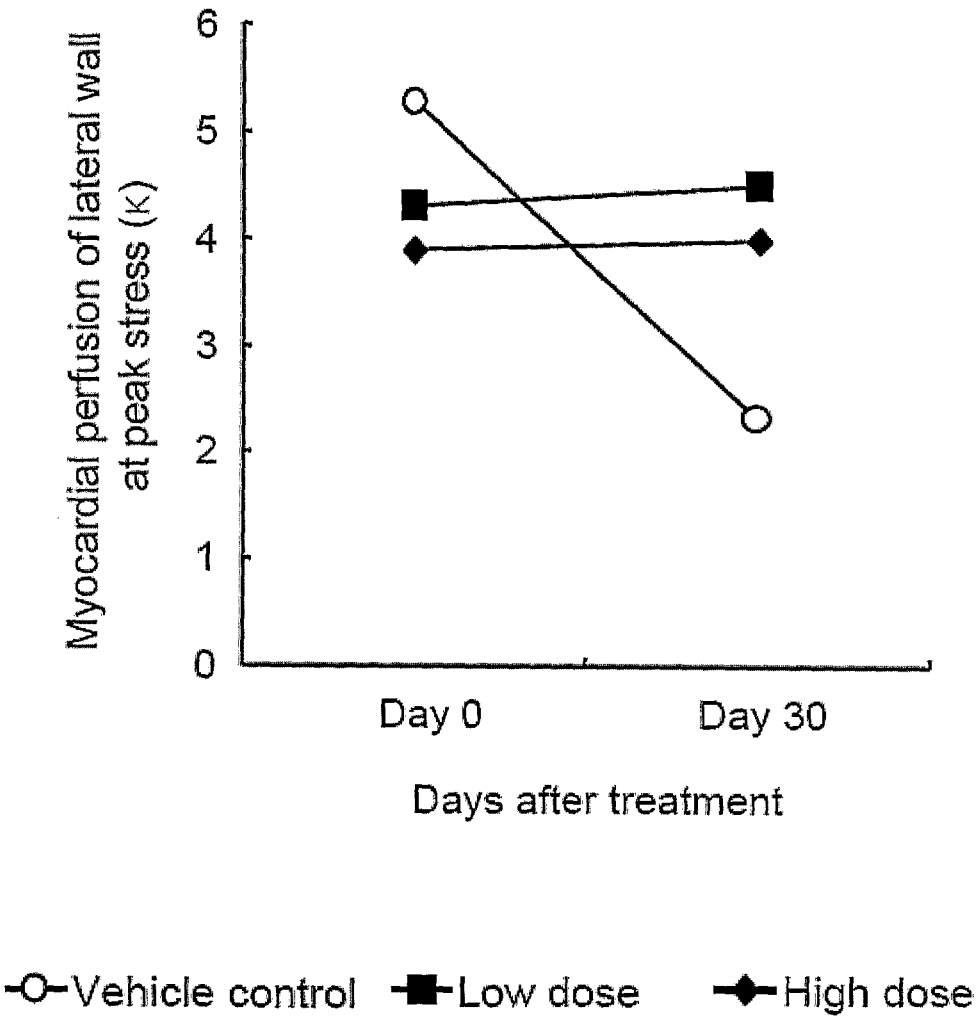

Myocardial perfusion of lateral wall at peak stress (K)
6
5
4
3
2
1
0
Day 0
Day 30
Days after treatment
Vehicle control
Low dose
High dose

FIG. 13 (continued)

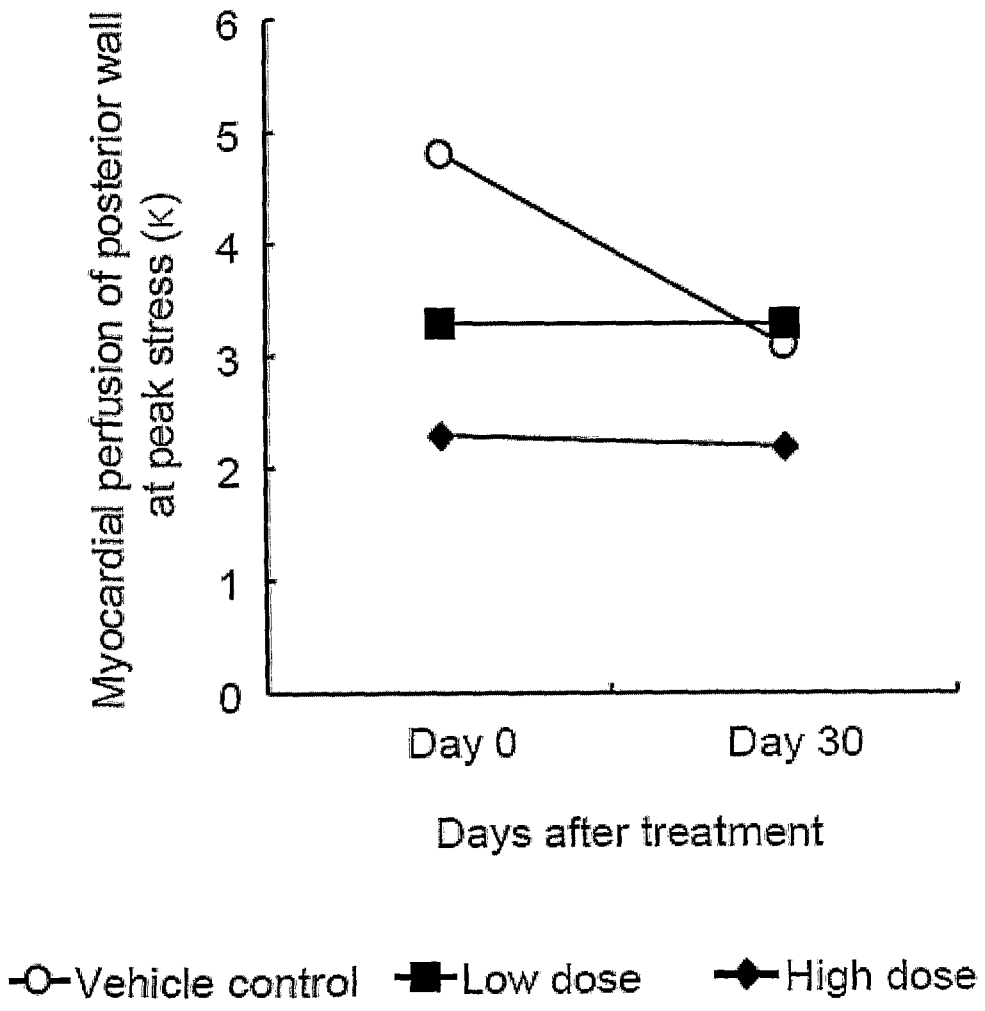


FIG. 14

A

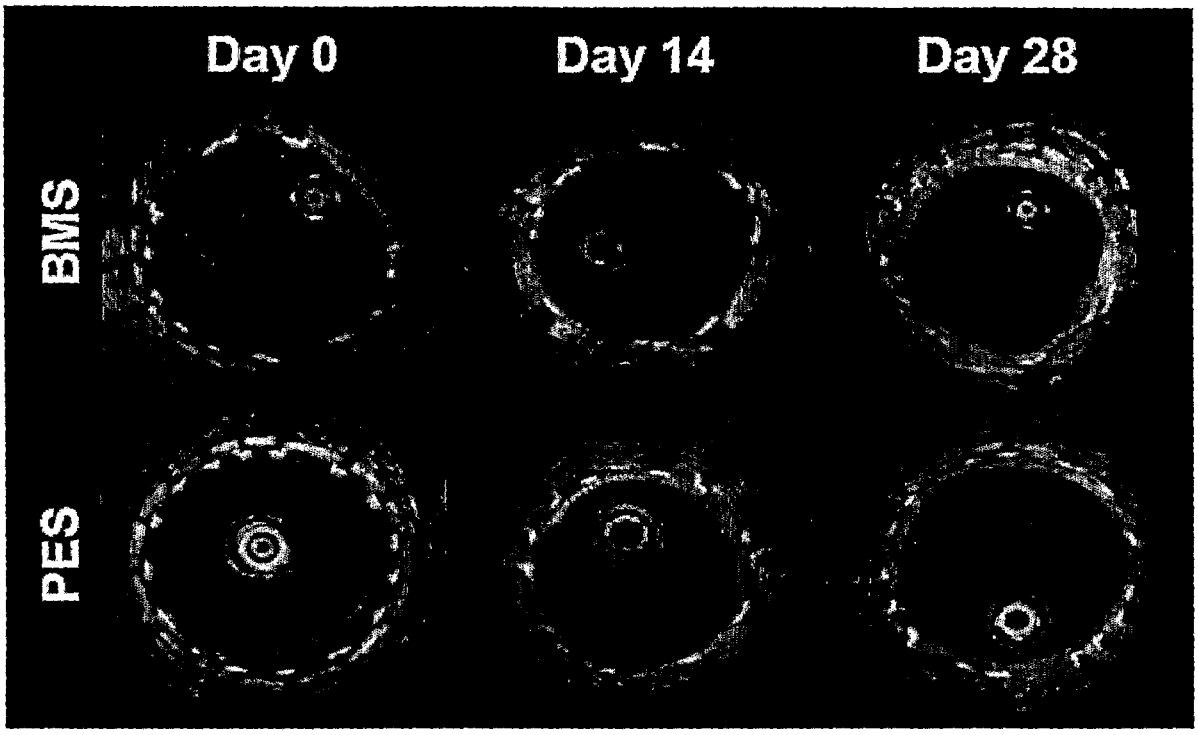


FIG. 14 (continued)

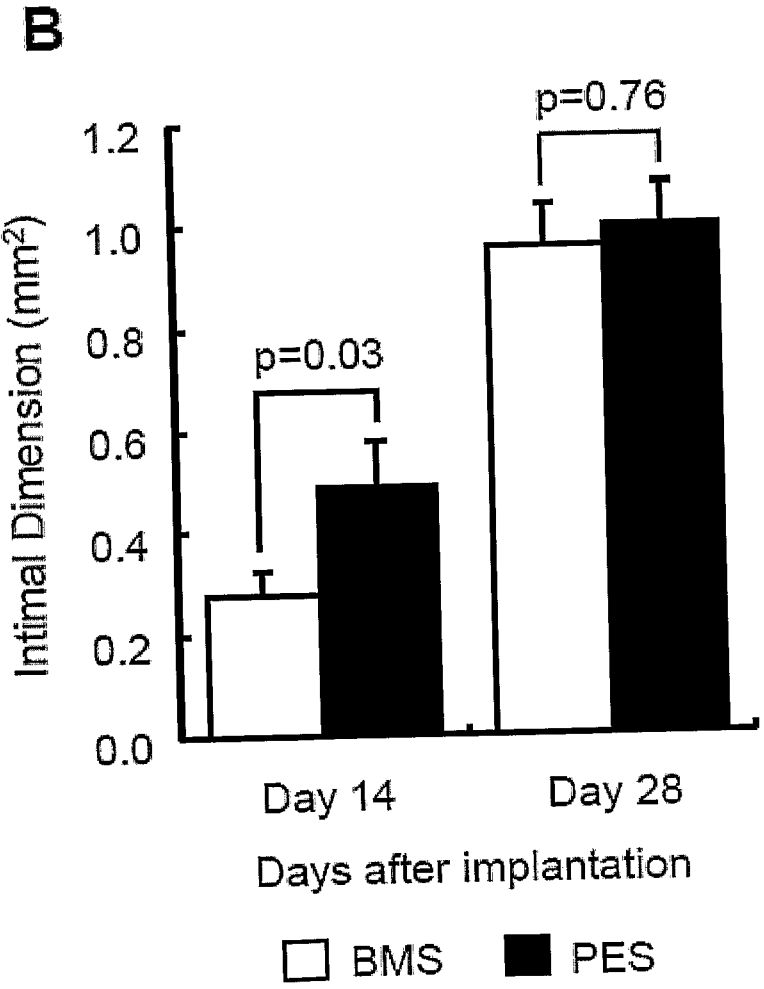
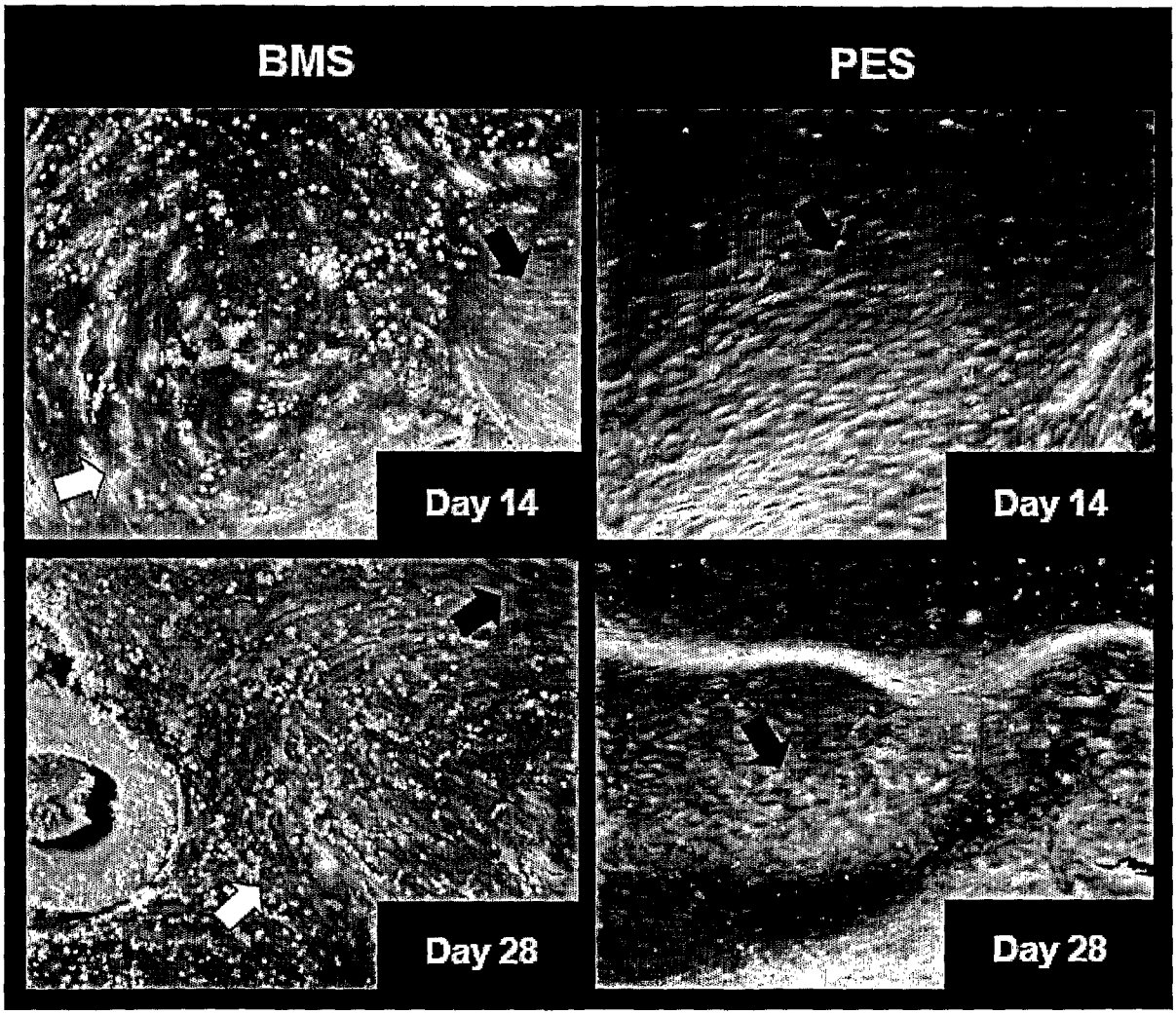


FIG. 15



1. White arrow: Smooth muscle cell layer
2. Black arrow: Endothelial cell layer
3. Magnification: x200