Figure 1

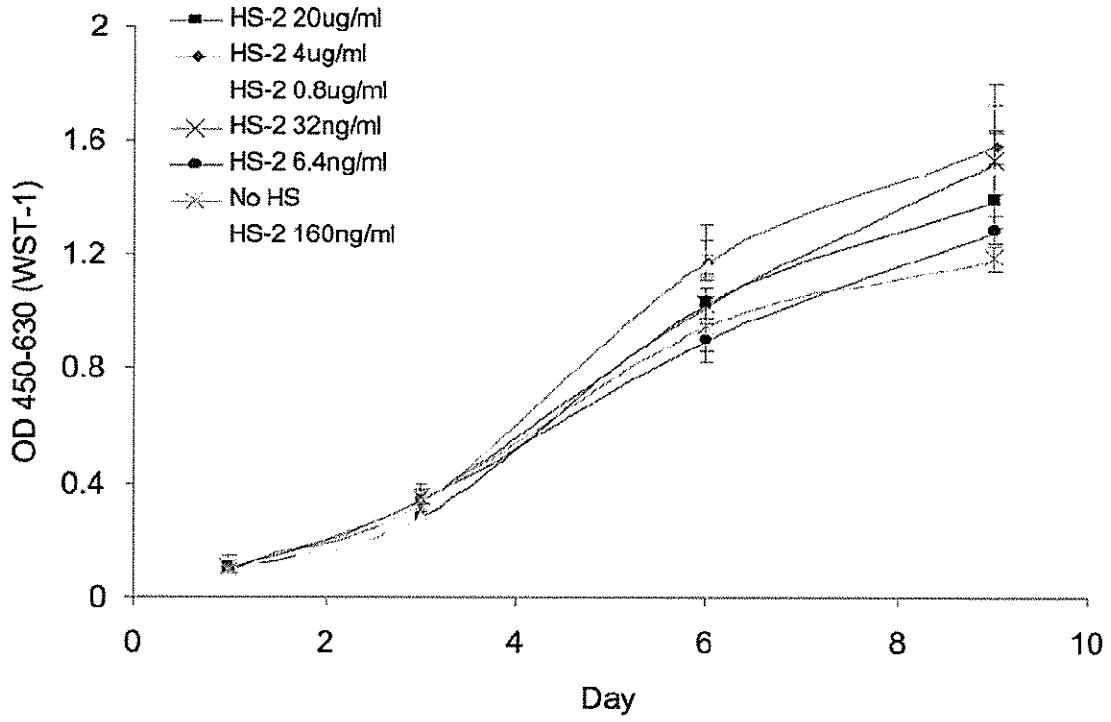

HS-2 20ug/ml
HS-2 4ug/ml
HS-2 0.8ug/ml
HS-2 32ng/ml
HS-2 6.4ng/ml
No HS
HS-2 160ng/ml
OD 450-630 (WST-1)
2
1.6
1.2
0.8
0.4
0
0
2
4
6
8
10
Day

Figure 2

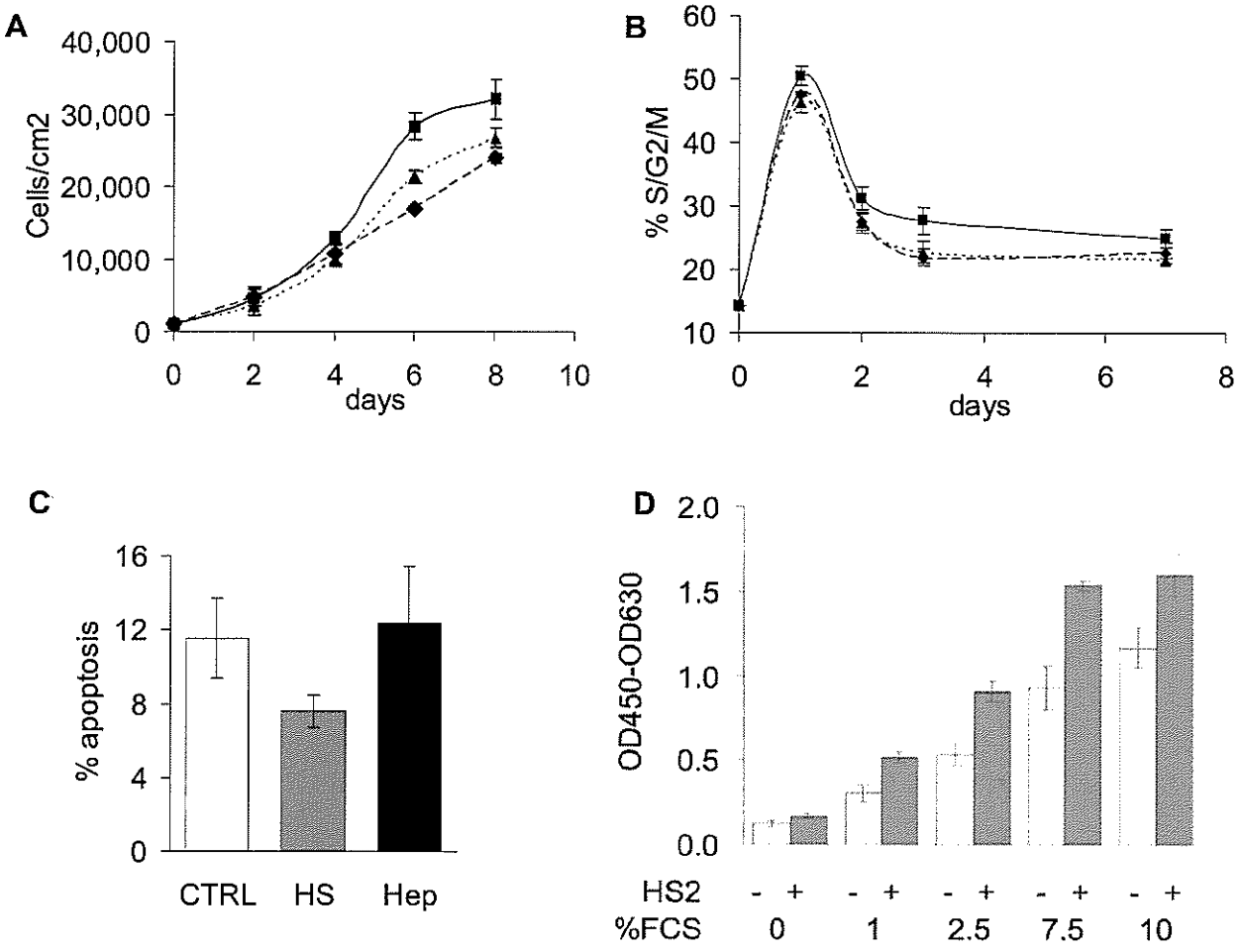

A
40,000
30,000
20,000
10,000
0
Cells/cm2
0
2
4
6
8
10
days
B
60
50
40
30
20
10
% S/G2/M
0
2
4
6
8
days
C
16
12
8
4
0
% apoptosis
CTRL
HS
Hep
D
2.0
1.5
1.0
0.5
0.0
OD450-OD630
HS2
- + - + - + - + - +
%FCS
0
1
2.5
7.5
10

Figure 3

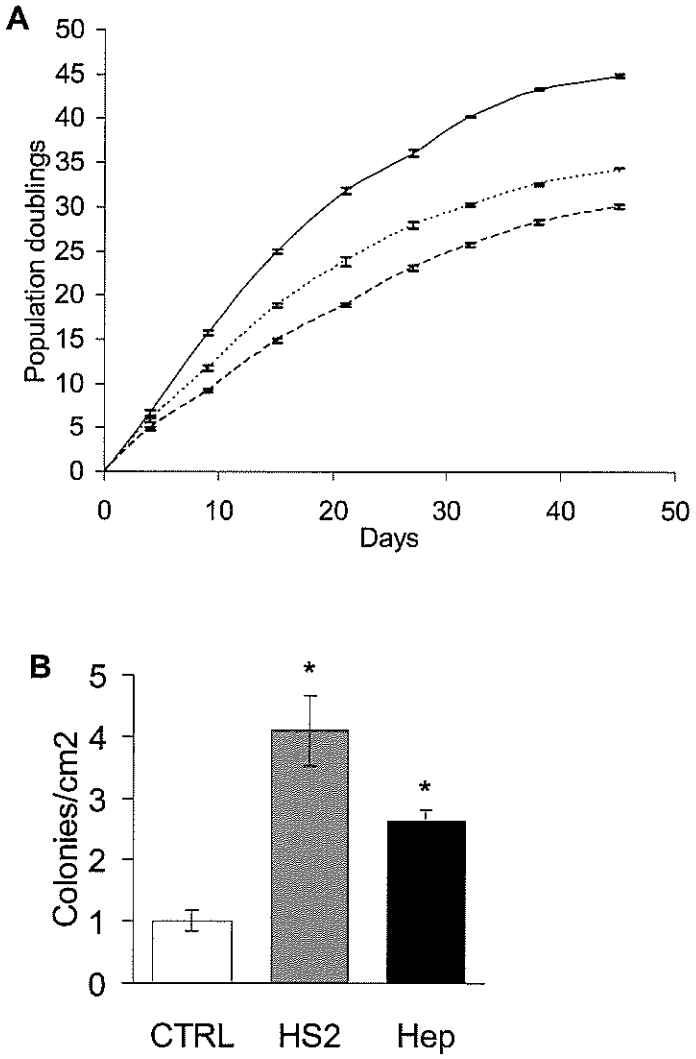

A
Population doublings
Days
0
5
10
15
20
25
30
35
40
45
50
0
10
20
30
40
50
B
Colonies/cm2
0
1
2
3
4
5
*
*
CTRL
HS2
Hep

Figure 4

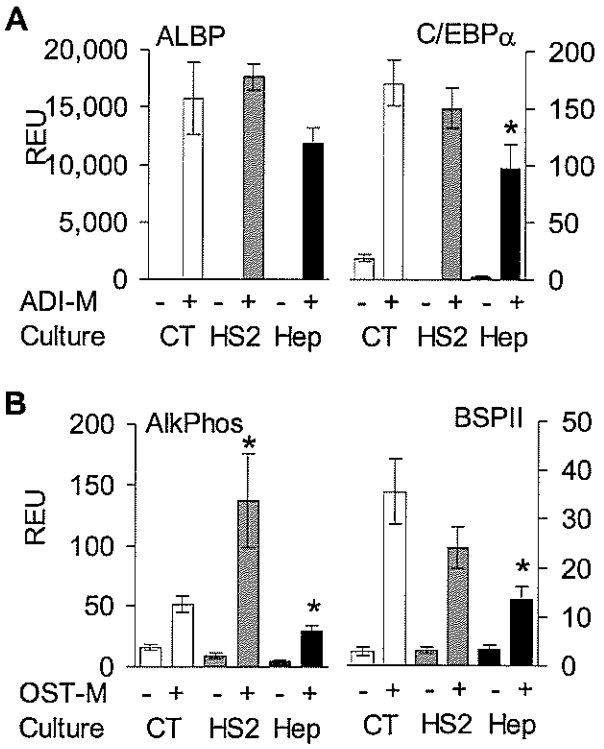

A
ALBP
C/EBPα
REU
20,000
15,000
10,000
5,000
0
200
150
100
50
0
*
ADI-M
- + - + - +
- + - + - +
Culture
CT HS2 Hep
CT HS2 Hep
B
AlkPhos
BSPII
REU
200
150
100
50
0
50
40
30
20
10
0
*
*
*
OST-M
- + - + - +
- + - + - +
Culture
CT HS2 Hep
CT HS2 Hep

Figure 5

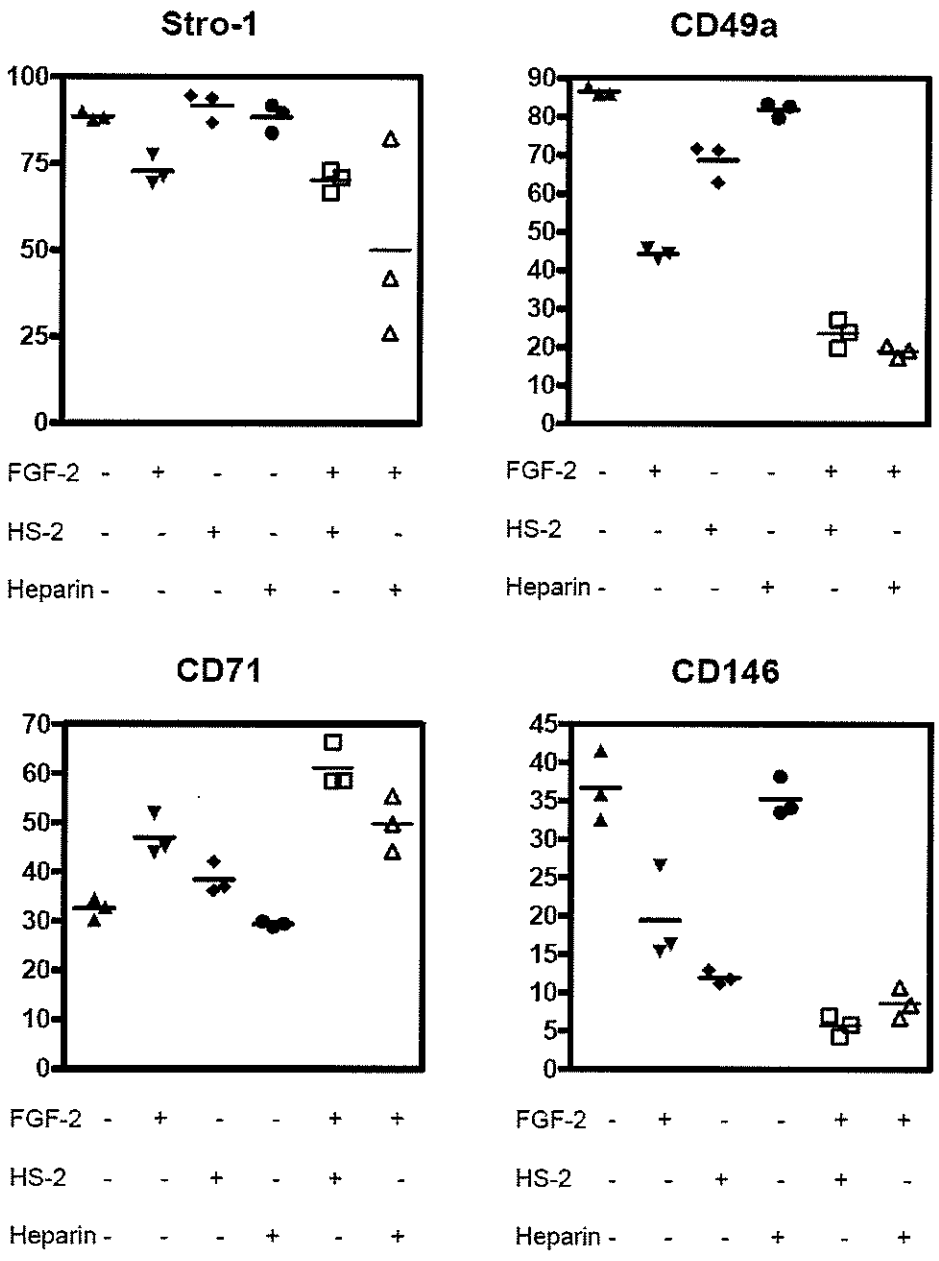

Stro-1
100
75
50
25
0
FGF-2 - + - - + +
HS-2 - - + - + -
Heparin - - - + - +
CD49a
90
80
70
60
50
40
30
20
10
0
FGF-2 - + - - + +
HS-2 - - + - + -
Heparin - - - + - +
CD71
70
60
50
40
30
20
10
0
FGF-2 - + - - + +
HS-2 - - + - + -
Heparin - - - + - +
CD146
45
40
35
30
25
20
15
10
5
0
FGF-2 - + - - + +
HS-2 - - + - + -
Heparin - - - + - +

Figure 6

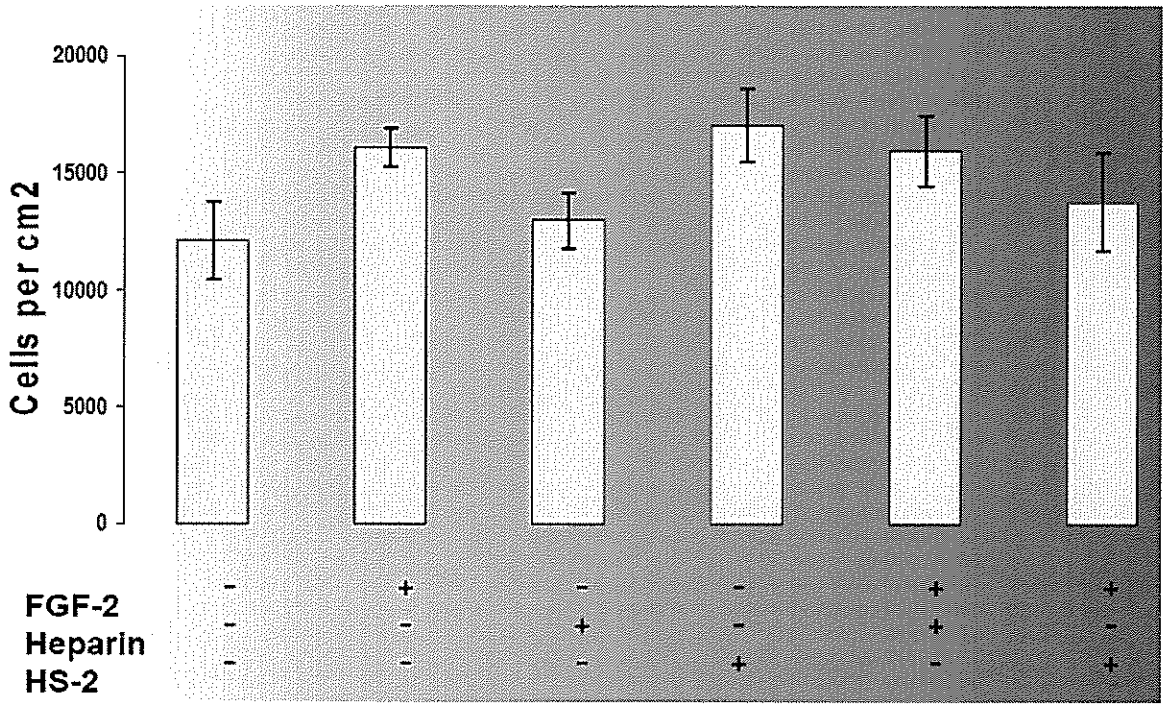


Figure 7

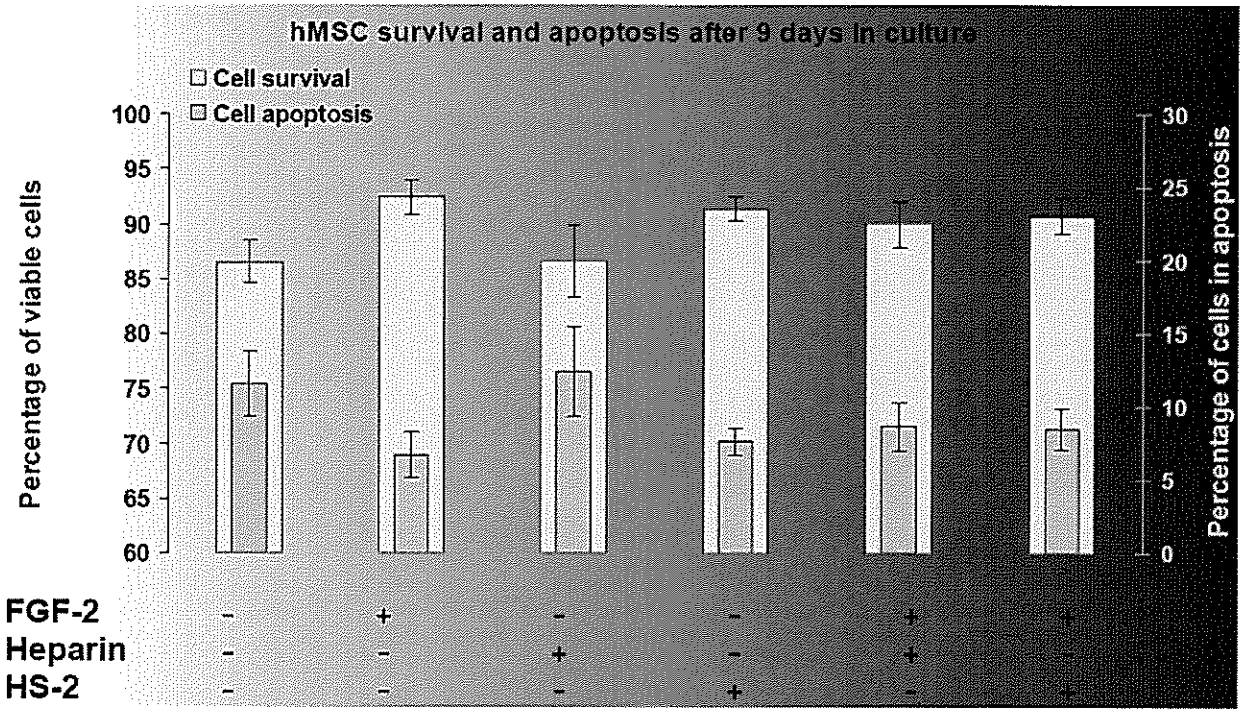
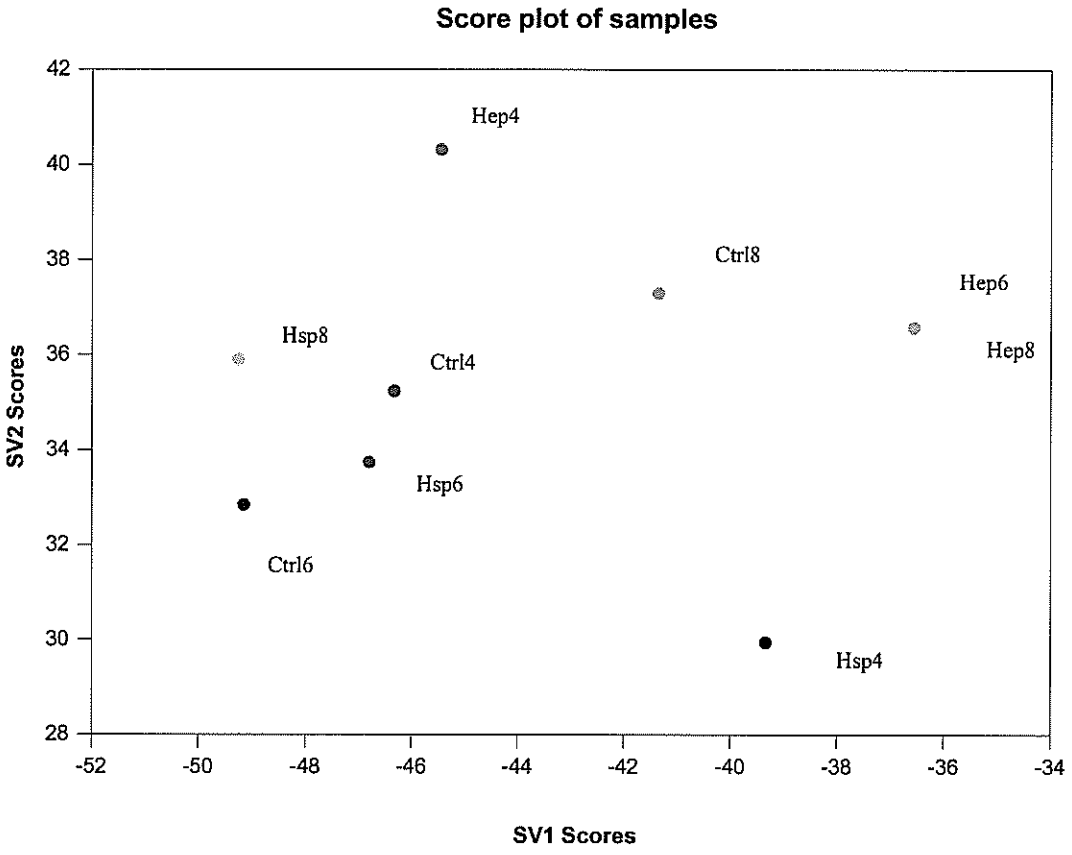

hMSC survival and apoptosis after 9 days in culture
Cell survival
Cell apoptosis
Percentage of viable cells
100
95
90
85
80
75
70
65
60
30
25
20
15
10
5
0
Percentage of cells in apoptosis
FGF-2
Heparin
HS-2
- + - - + +
- - + - + -
- - - + - +

Figure 8


Score plot of samples
SV2 Scores
SV1 Scores
42
40
38
36
34
32
30
28
-52
-50
-48
-46
-44
-42
-40
-38
-36
-34
Hep4
Ctrl8
Hep6
Hsp8
Hep8
Ctrl4
Hsp6
Ctrl6
Hsp4