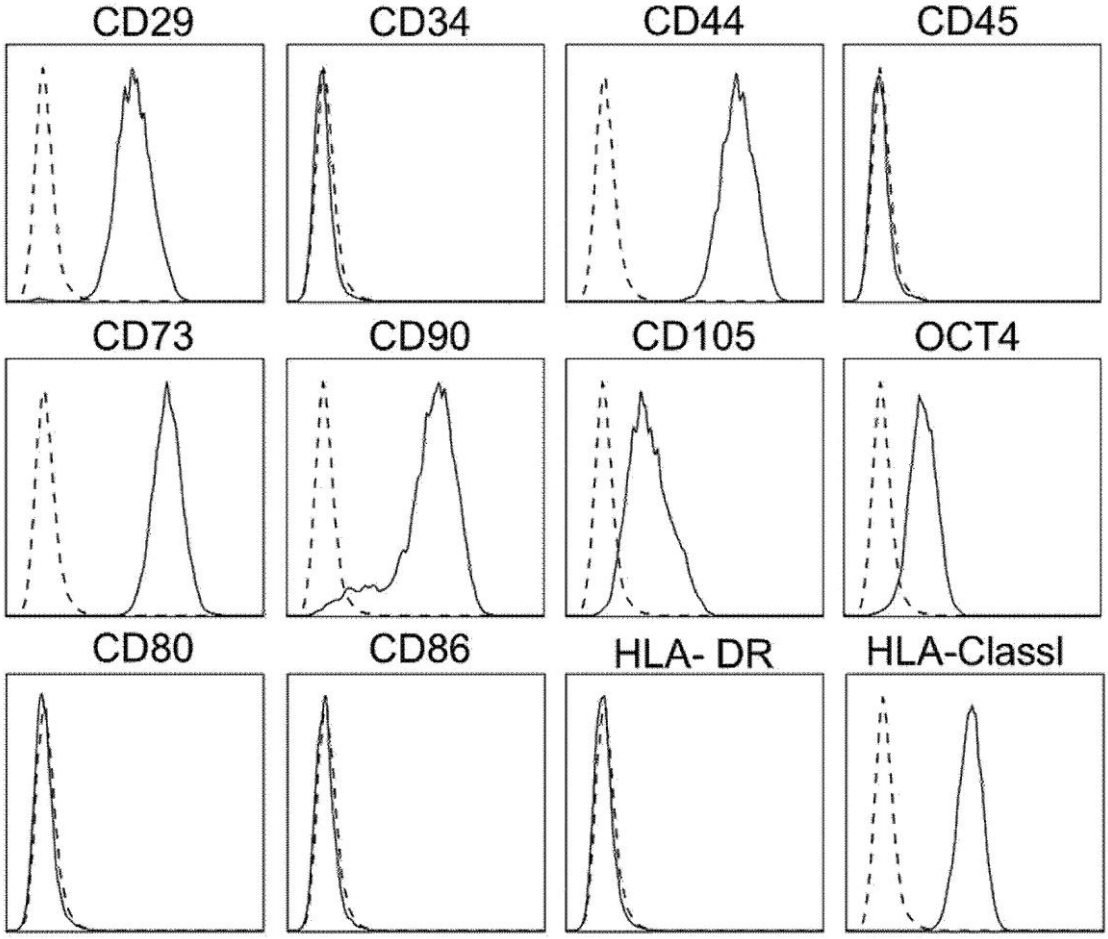
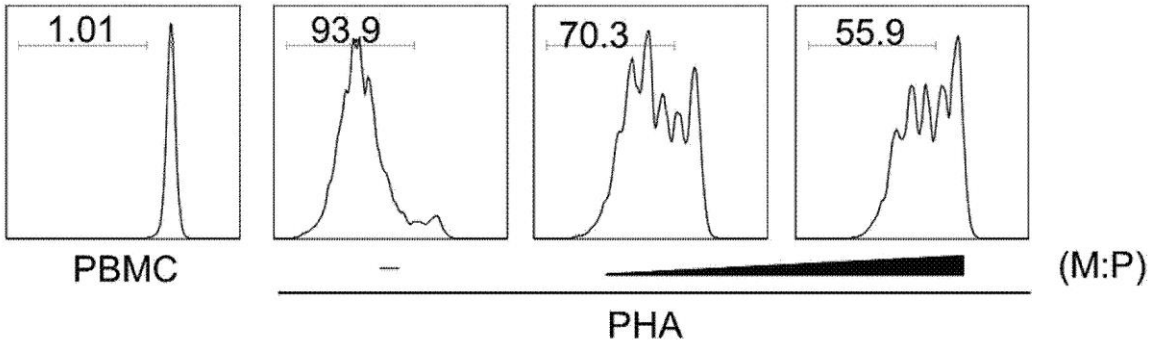
【Fig. 1】

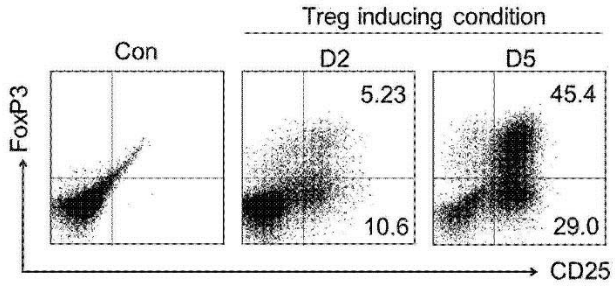

CD29
CD34
CD44
CD45
CD73
CD90
CD105
OCT4
CD80
CD86
HLA- DR
HLA-ClassI

【Fig. 2】

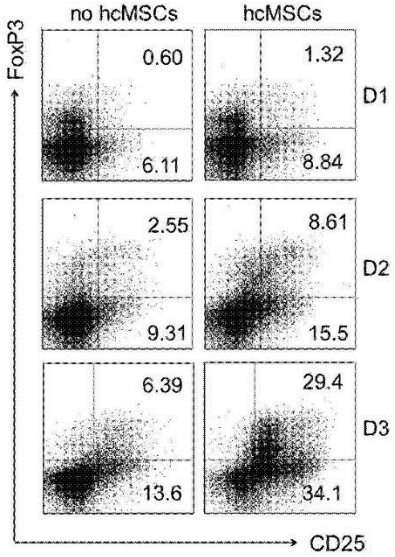

1.01
93.9
70.3
55.9
PBMC
—
(M:P)
PHA

【Fig. 3】

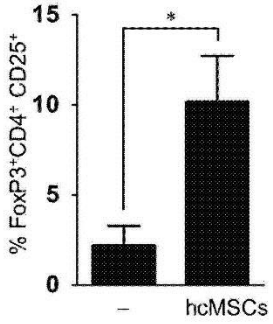
A




B

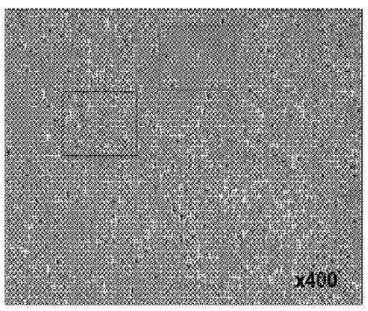



C

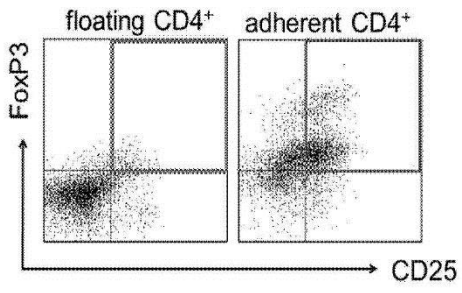



【Fig. 4】

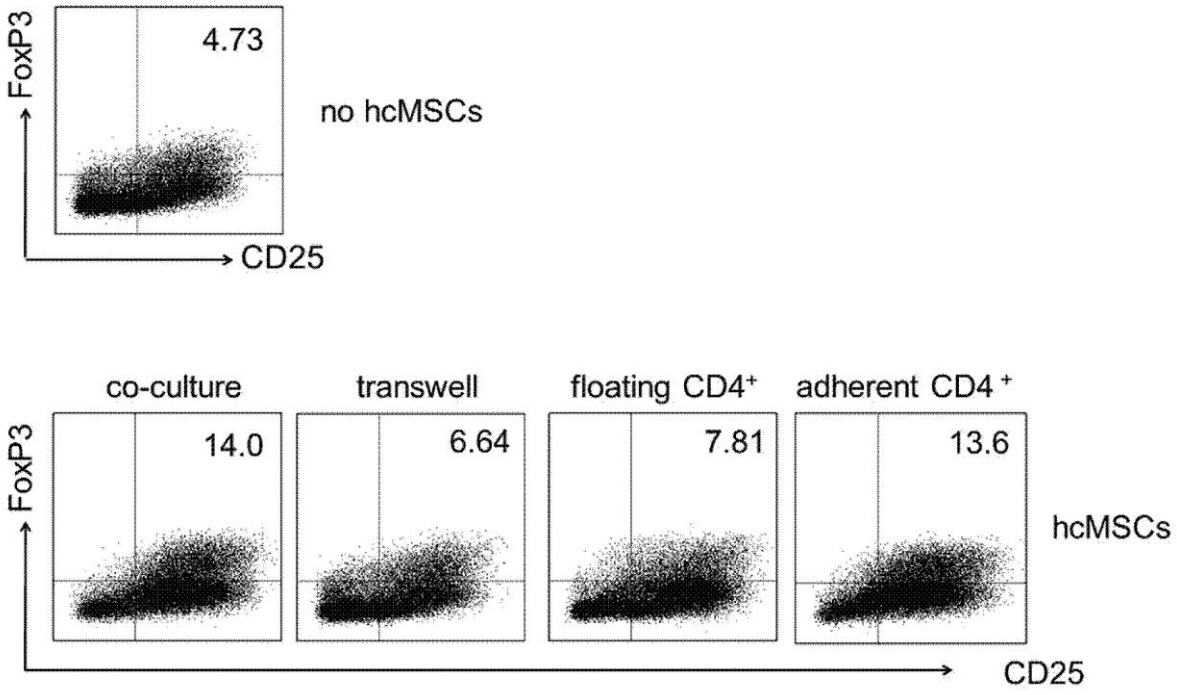
A



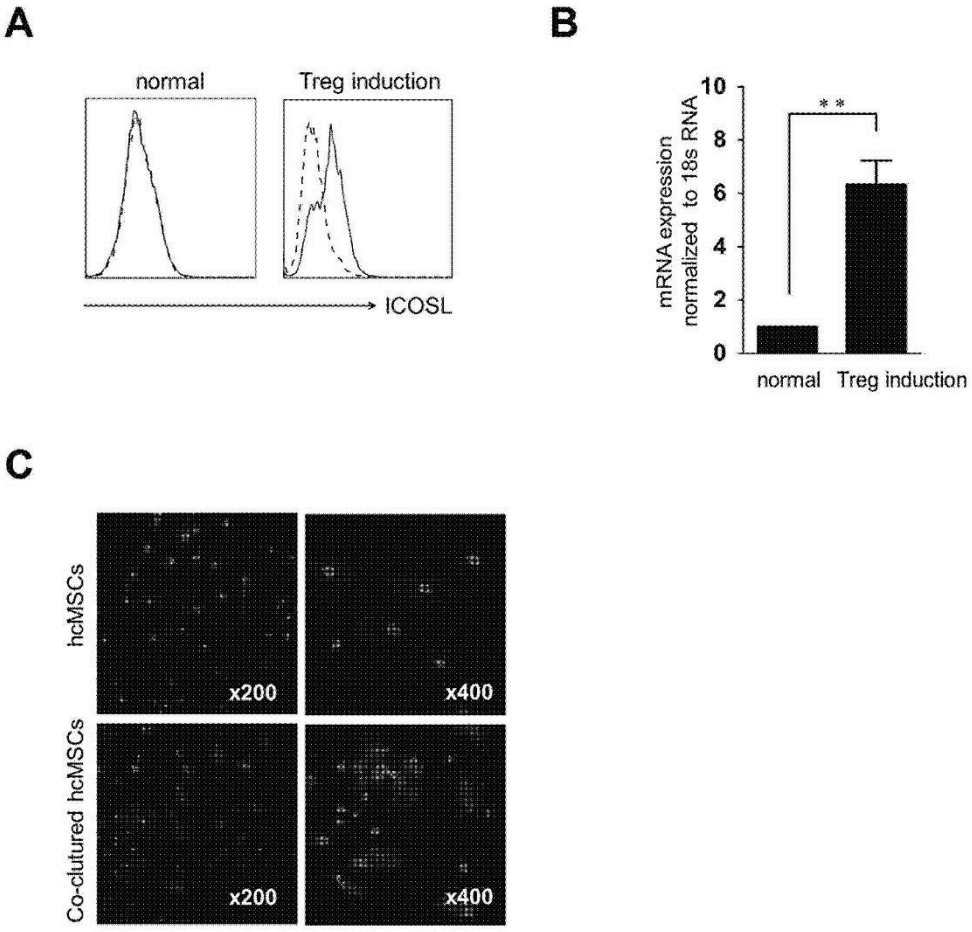

B



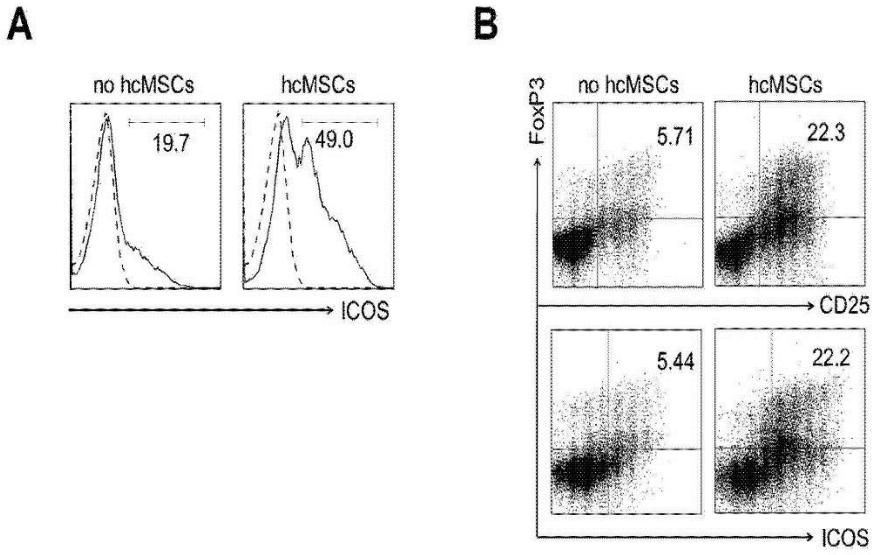
【Fig. 5】


FoxP3
4.73
no hcMSCs
CD25
co-culture
transwell
floating CD4+
adherent CD4+
FoxP3
14.0
6.64
7.81
13.6
hcMSCs
CD25

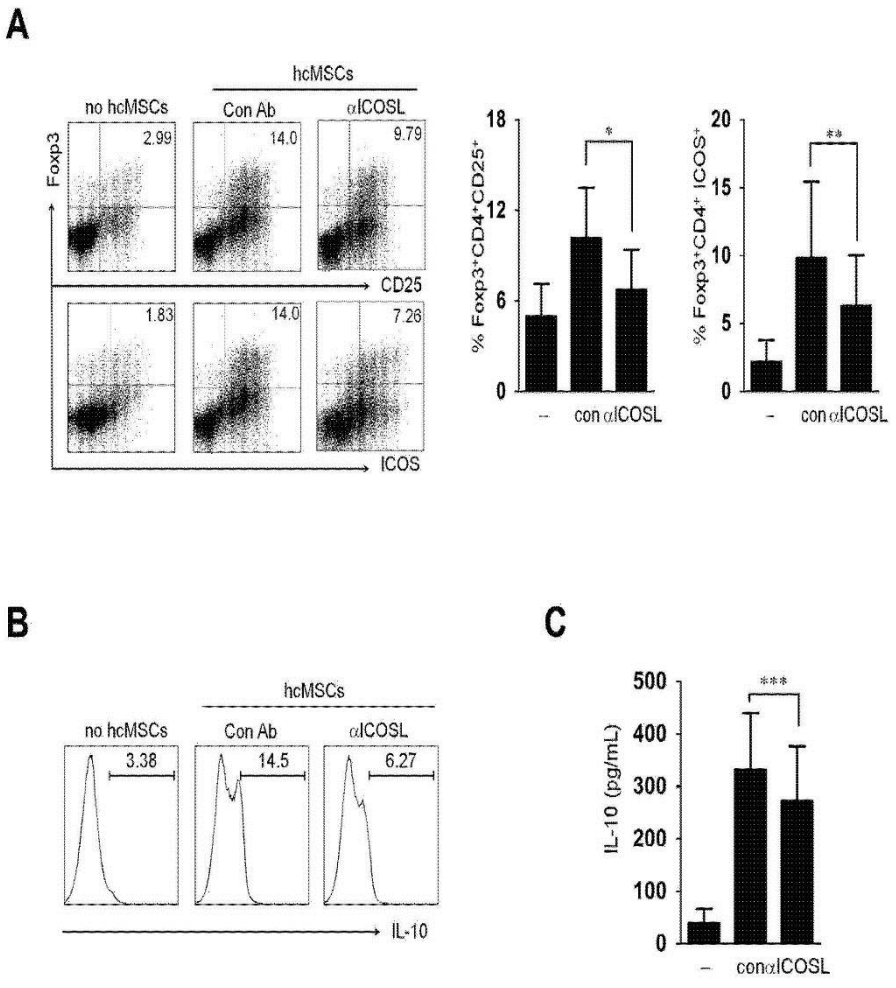
【Fig. 6】


A
normal
Treg induction
ICOSL
B
mRNA expression normalized to 18s RNA
10
8
6
4
2
0
**
normal
Treg induction
C
hcMSCs
x200
x400
Co-cluttured hcMSCs
x200
x400

【Fig. 7】

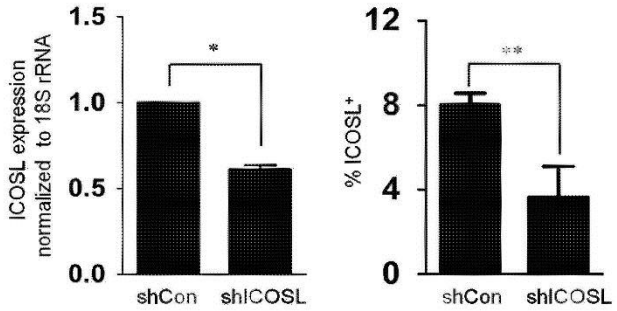

A
no hcMSCs
hcMSCs
19.7
49.0
ICOS
B
FoxP3
no hcMSCs
hcMSCs
5.71
22.3
CD25
5.44
22.2
ICOS

【Fig. 8】

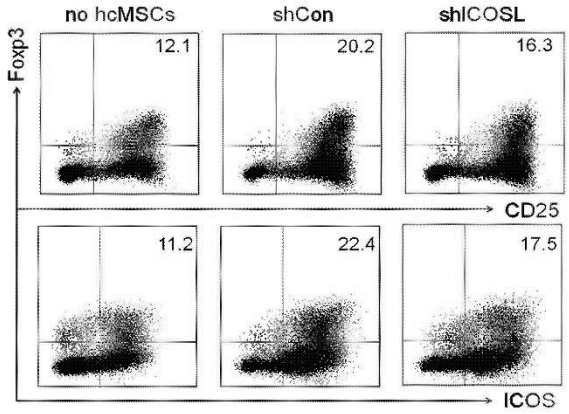

A
hcMSCs
no hcMSCs
Con Ab
αICOSL
Foxp3
2.99
14.0
9.79
CD25
1.83
14.0
7.26
ICOS
% Foxp3+CD4+CD25+
18
12
6
0
*
– con αICOSL
% Foxp3+CD4+ ICOS+
20
15
10
5
0
**
– con αICOSL
B
hcMSCs
no hcMSCs
Con Ab
αICOSL
3.38
14.5
6.27
IL-10
C
IL-10 (pg/mL)
500
400
300
200
100
0
***
– conαICOSL

【Fig. 9】

A

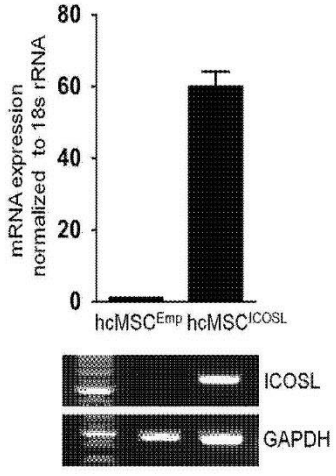



B

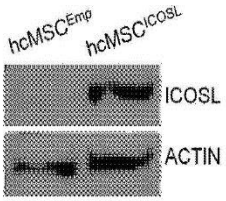



【Fig. 10】

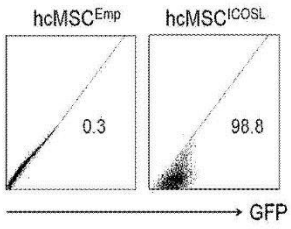
A



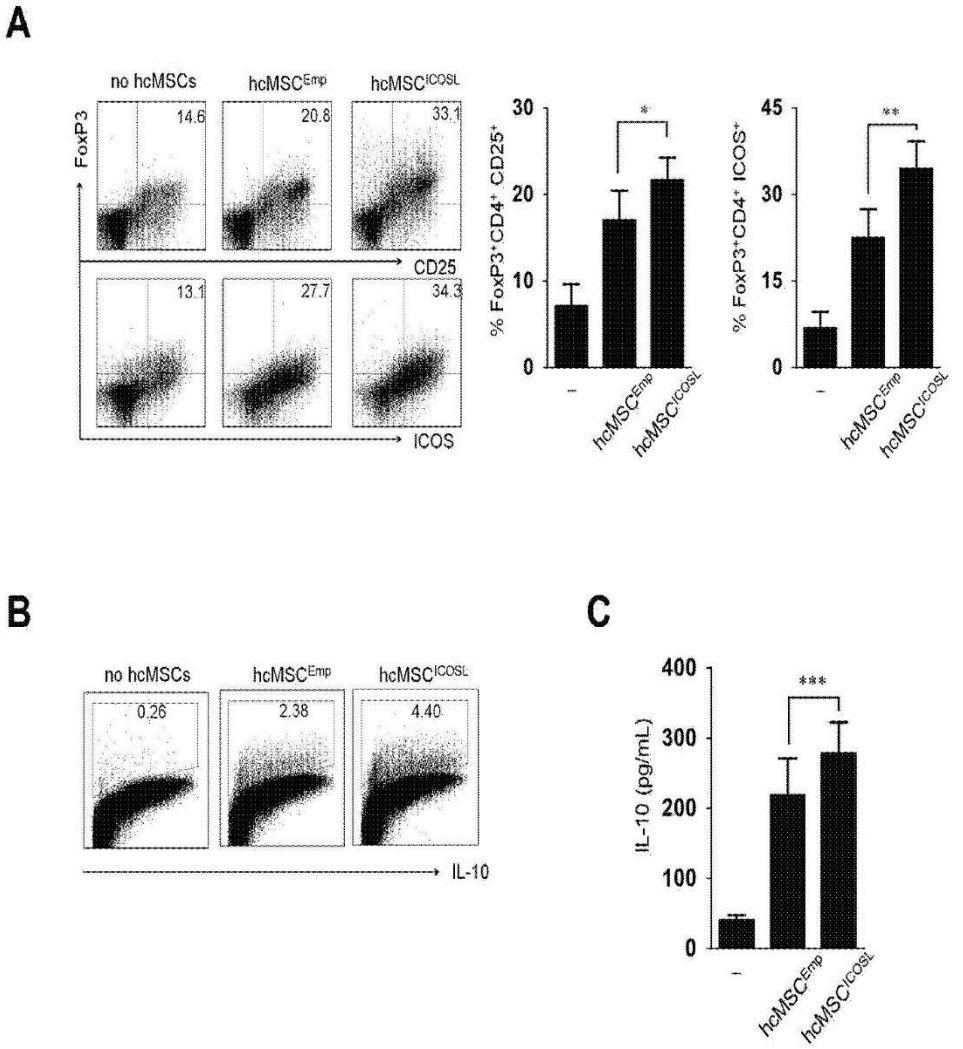

B



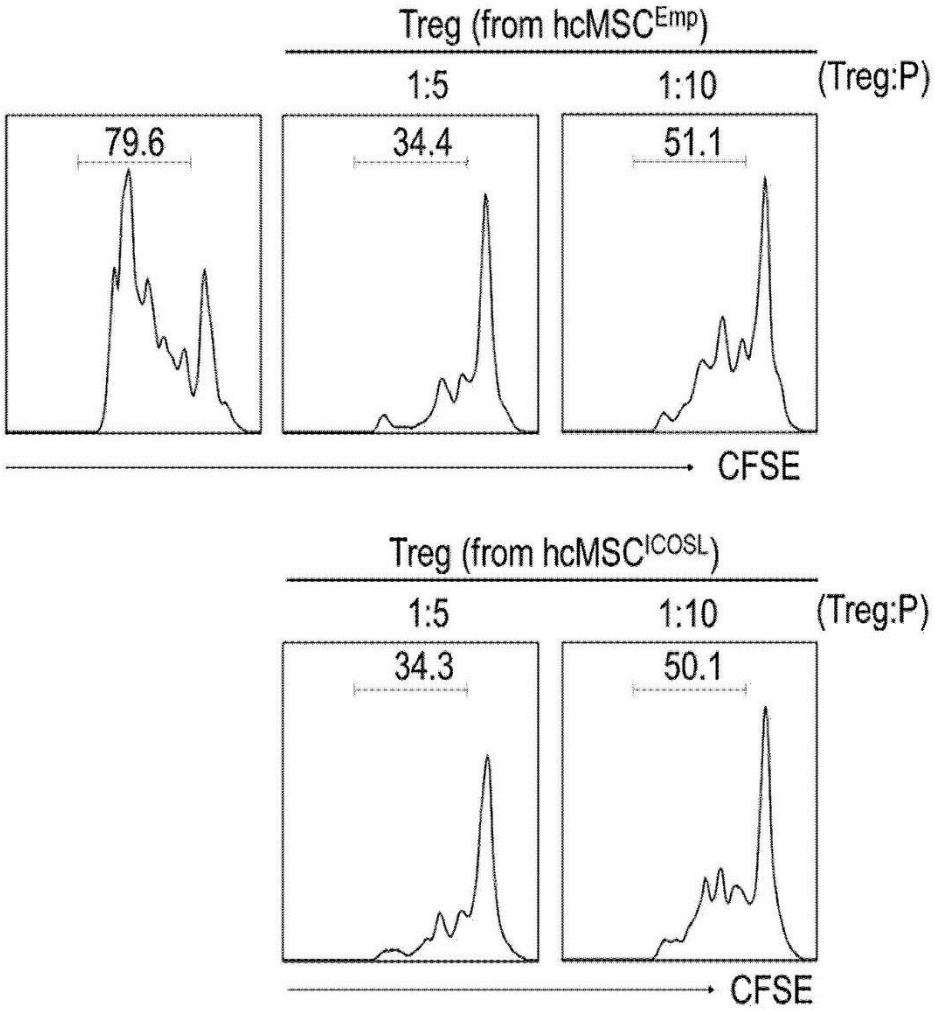

C



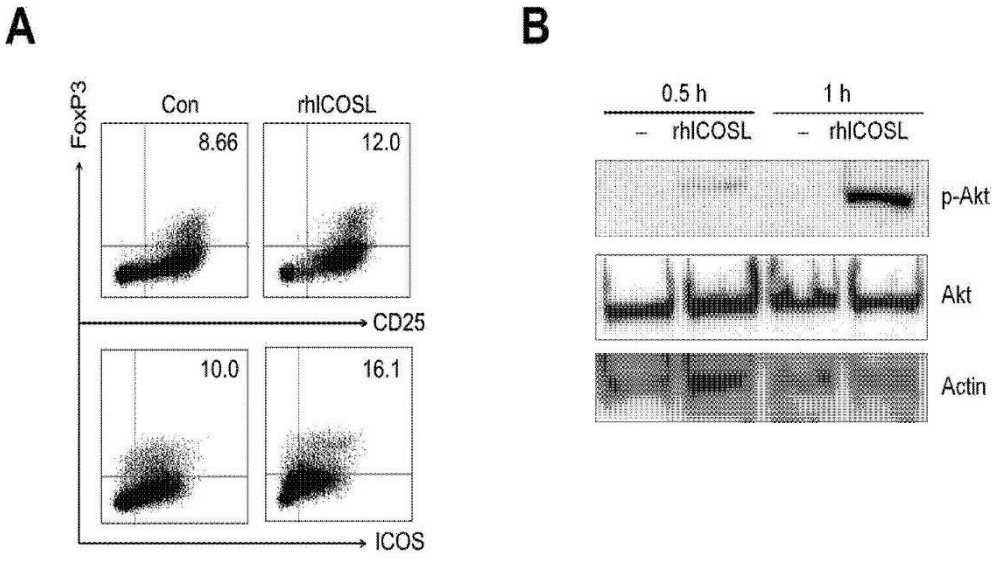
【Fig. 11】


A
no hcMSCs
hcMSCEmp
hcMSCICOSL
FoxP3
14.6
20.8
33.1
CD25
13.1
27.7
34.3
ICOS
% FoxP3+CD4+ CD25+
30
20
10
0
*
% FoxP3+CD4+ ICOS+
45
30
15
0
**
–
hcMSCEmp
hcMSCICOSL
B
no hcMSCs
hcMSCEmp
hcMSCICOSL
0.26
2.38
4.40
IL-10
C
IL-10 (pg/mL)
400
300
200
100
0
***
–
hcMSCEmp
hcMSCICOSL

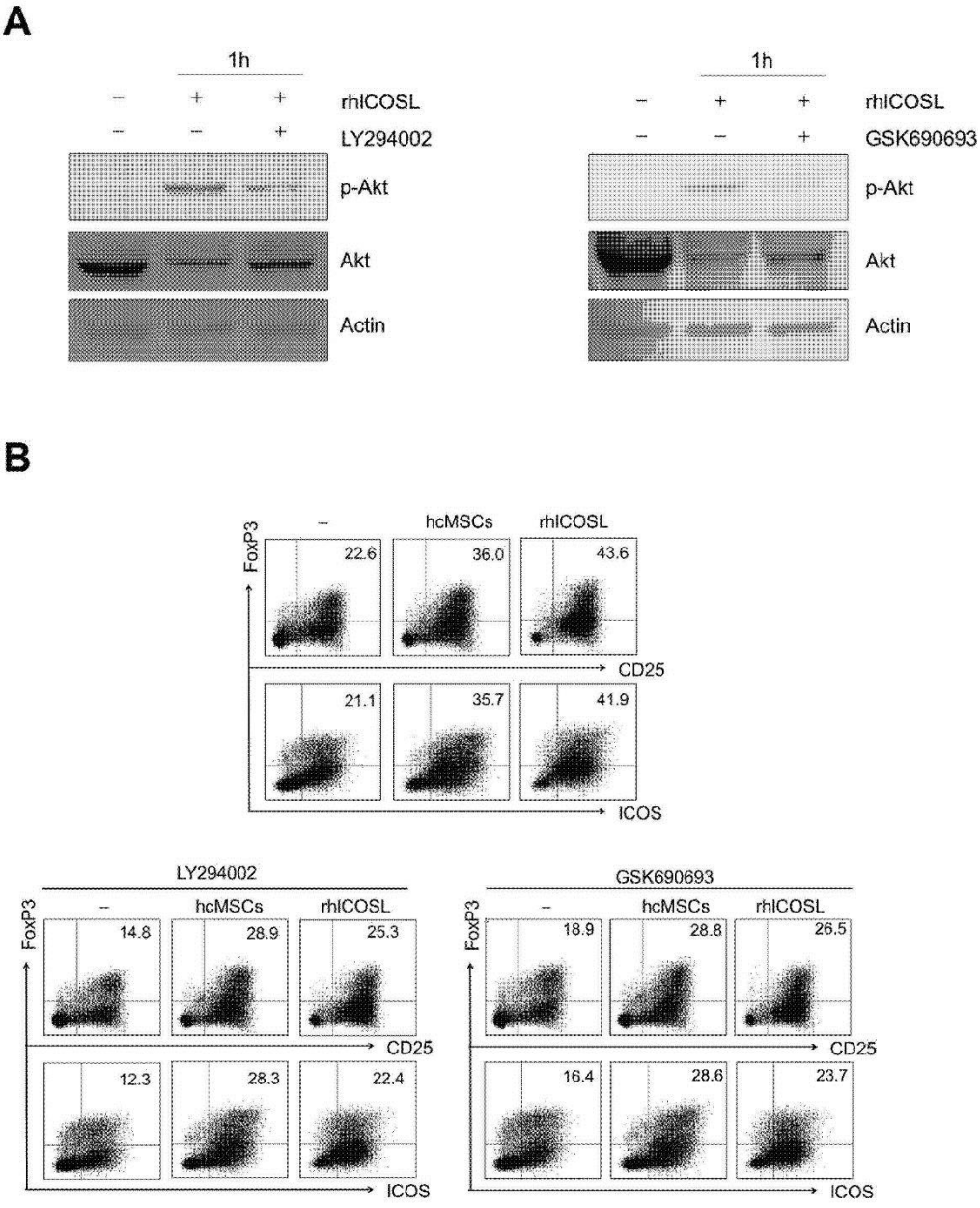
【Fig. 12】


Treg (from hcMSC$^{Emp}$)
1:5
1:10
(Treg:P)
79.6
34.4
51.1
CFSE
Treg (from hcMSC$^{ICOSL}$)
1:5
1:10
(Treg:P)
34.3
50.1
CFSE

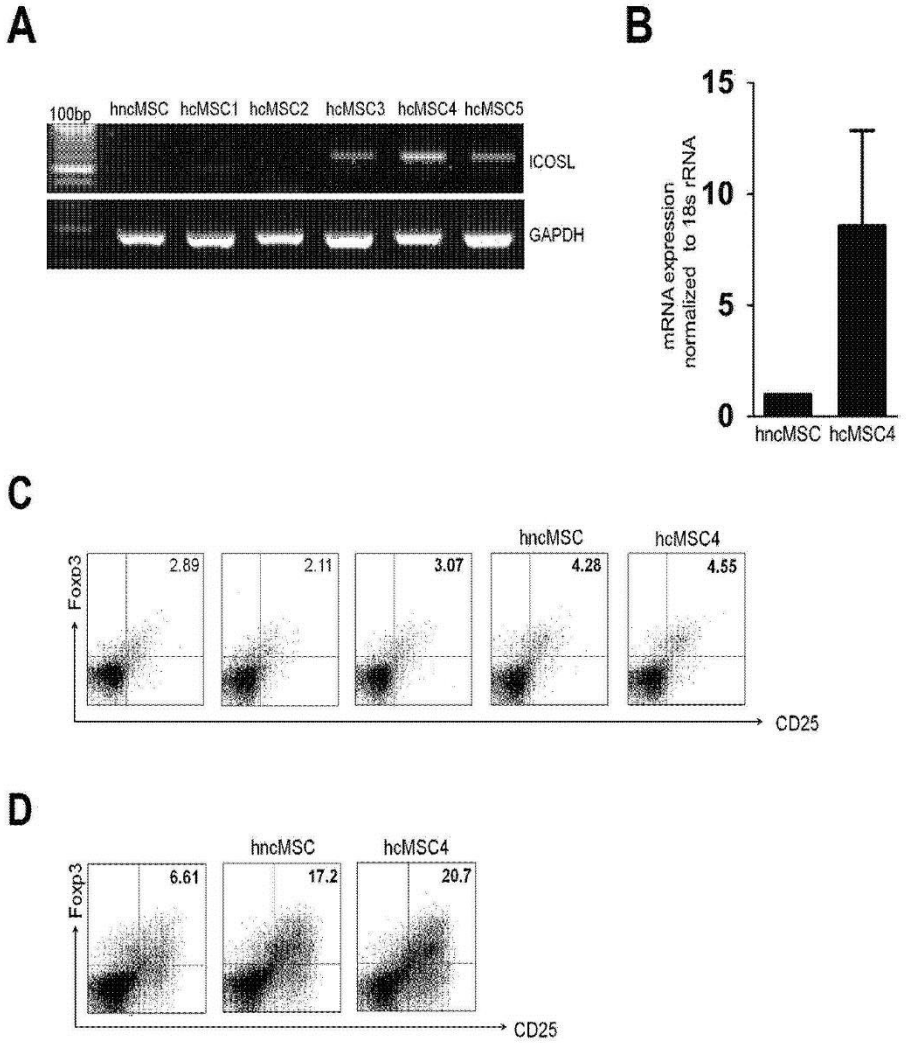
【Fig. 13】


A
B
FoxP3
Con
rhICOSL
8.66
12.0
CD25
10.0
16.1
ICOS
0.5 h
1 h
– rhICOSL
– rhICOSL
p-Akt
Akt
Actin

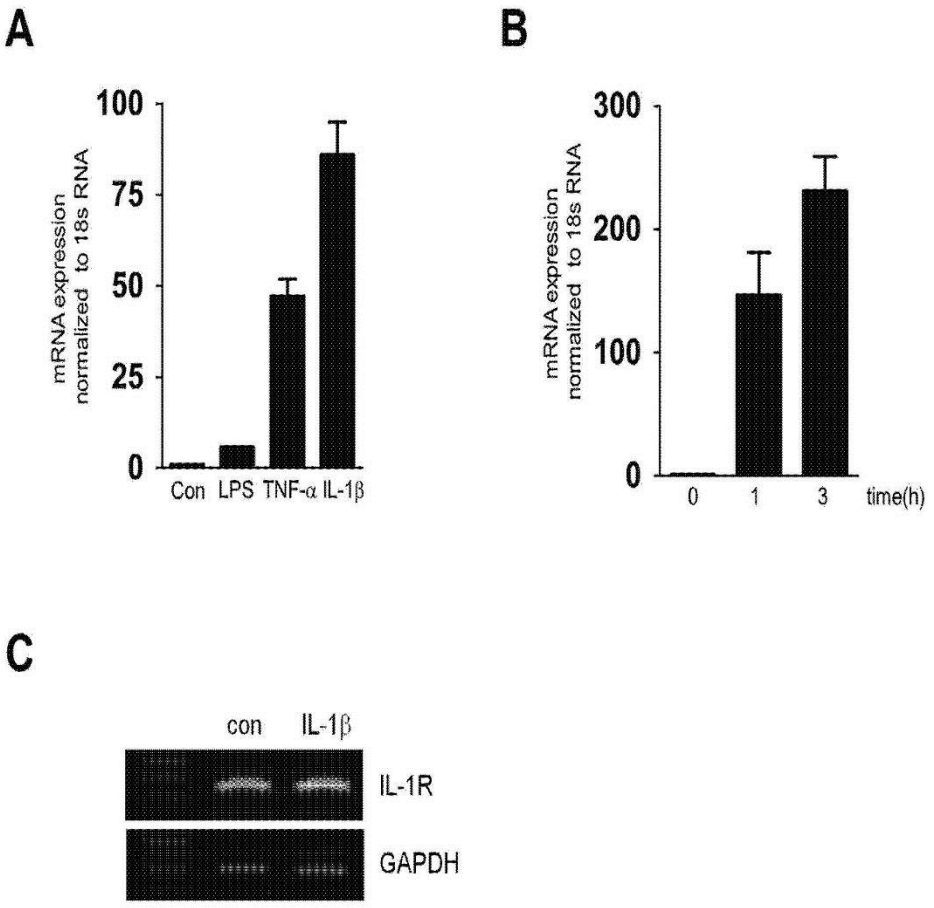
【Fig. 14】


A
1h
rhICOSL
LY294002
p-Akt
Akt
Actin
1h
rhICOSL
GSK690693
p-Akt
Akt
Actin
B
hcMSCs
rhICOSL
FoxP3
CD25
ICOS
22.6
36.0
43.6
21.1
35.7
41.9
LY294002
GSK690693
14.8
28.9
25.3
12.3
28.3
22.4
18.9
28.8
26.5
16.4
28.6
23.7

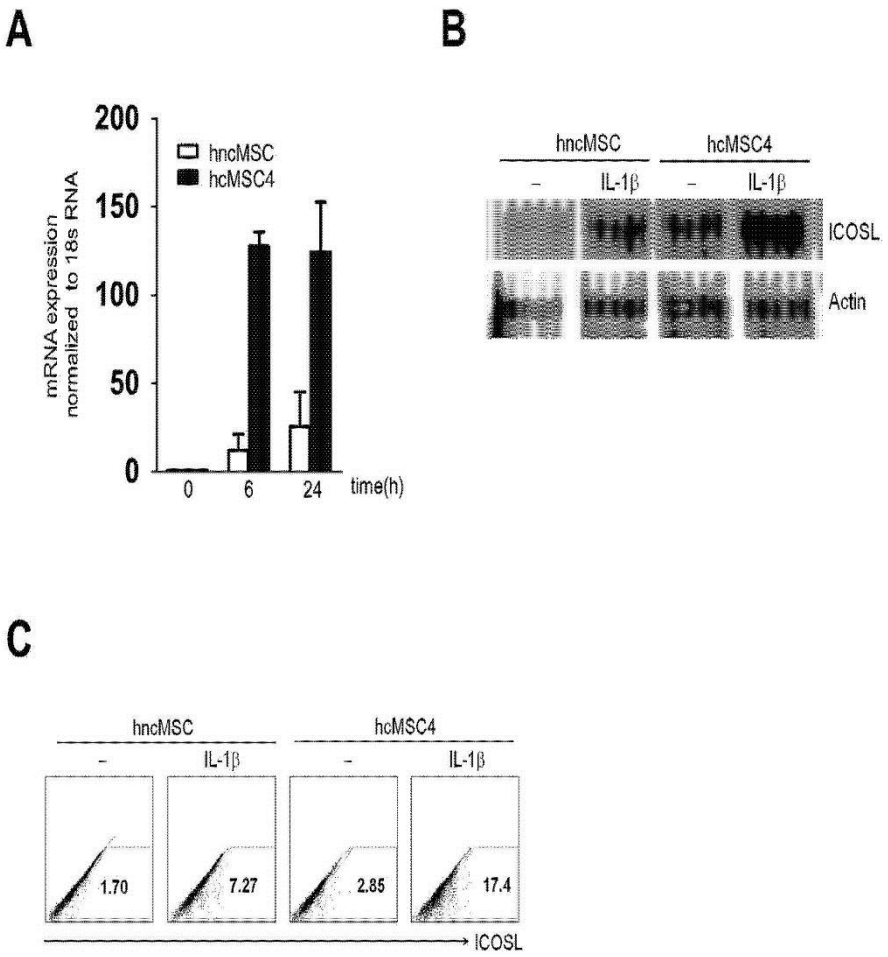
【Fig. 15】


A
100bp
hncMSC
hcMSC1
hcMSC2
hcMSC3
hcMSC4
hcMSC5
ICOSL
GAPDH
B
mRNA expression normalized to 18s rRNA
15
10
5
0
hncMSC
hcMSC4
C
hncMSC
hcMSC4
Foxp3
2.89
2.11
3.07
4.28
4.55
CD25
D
hncMSC
hcMSC4
Foxp3
6.61
17.2
20.7
CD25

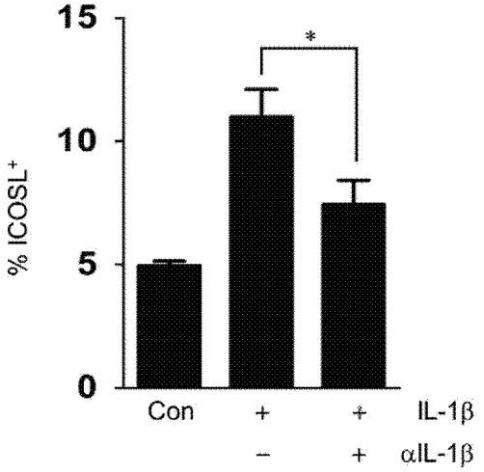
【Fig. 16】


A
B
C
mRNA expression normalized to 18s RNA
100
75
50
25
0
Con
LPS
TNF-α
IL-1β
300
200
100
0
1
3
time(h)
con
IL-1β
IL-1R
GAPDH

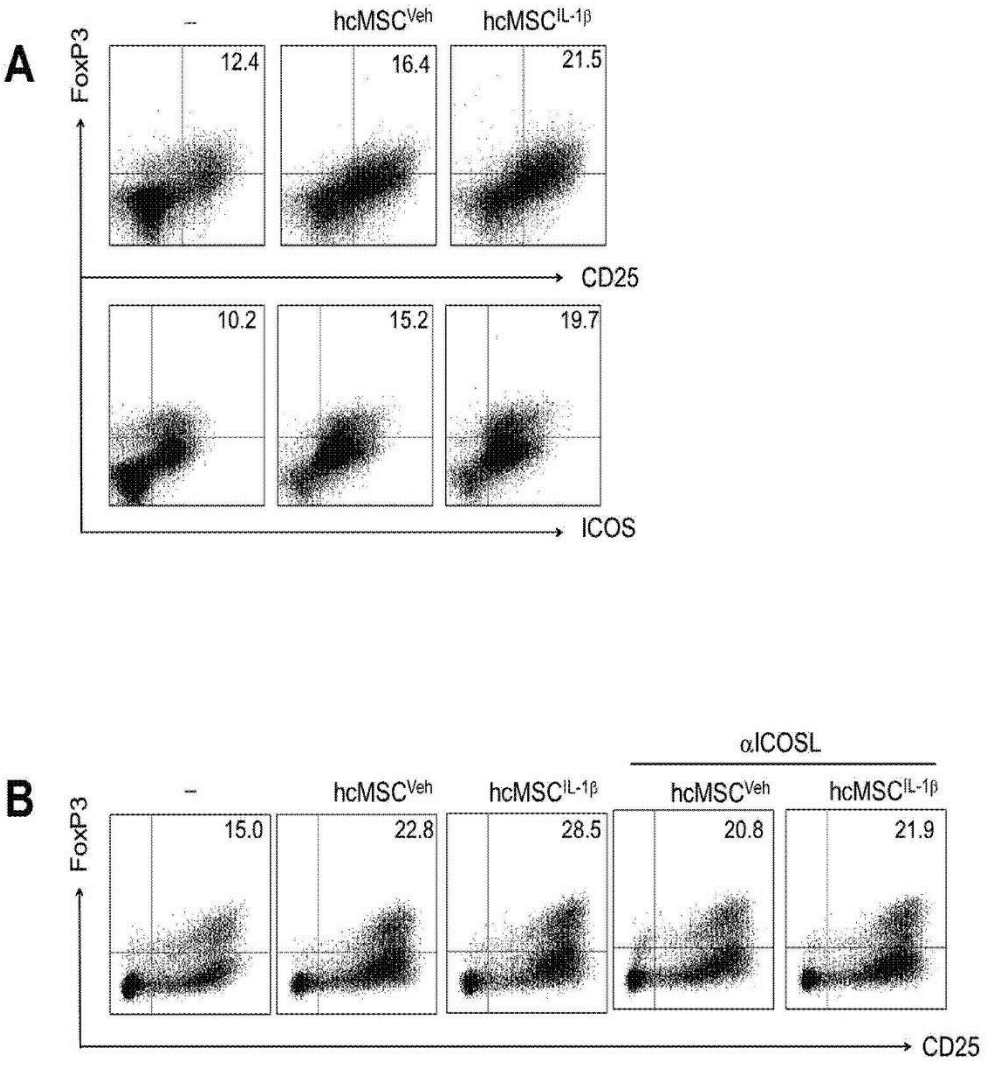
【Fig. 17】


A
B
C
200
150
100
50
0
hncMSC
hcMSC4
mRNA expression normalized to 18s RNA
0
6
24
time(h)
hncMSC
hcMSC4
–
IL-1β
–
IL-1β
ICOSL
Actin
hncMSC
hcMSC4
–
IL-1β
–
IL-1β
1.70
7.27
2.85
17.4
ICOSL

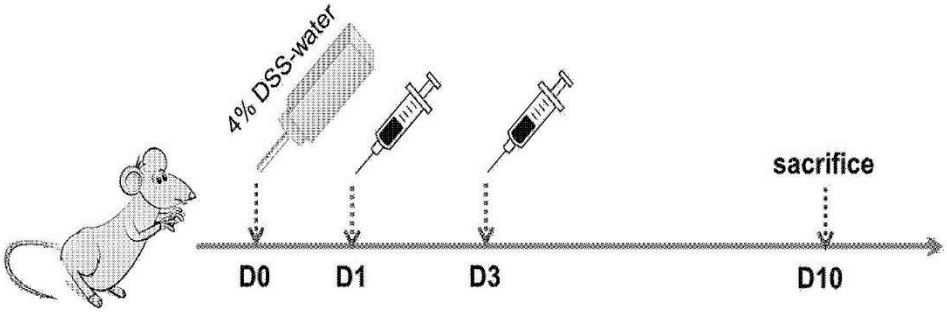
【Fig. 18】


15
10
5
0
% ICOSL+
*
Con
+
+
IL-1β
–
+
αIL-1β

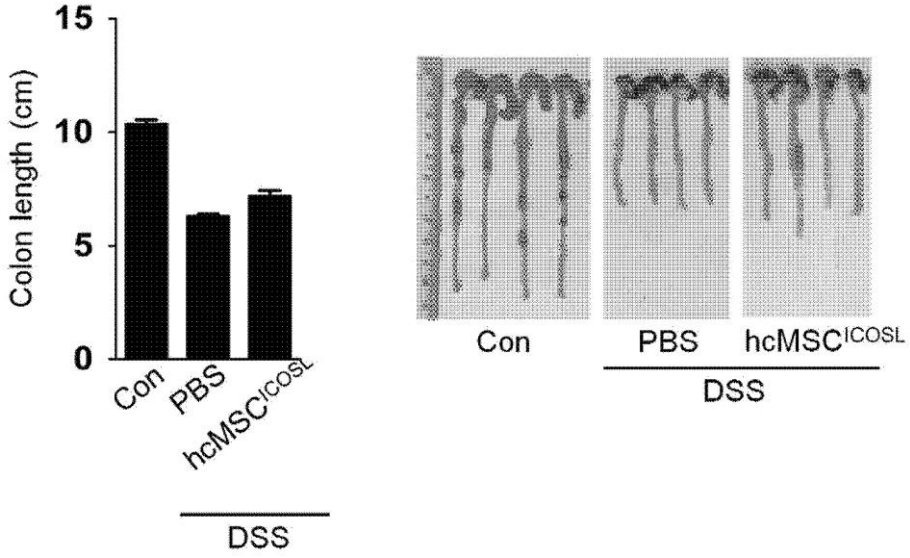
【Fig. 19】


A
–
hcMSCVeh
hcMSCIL-1β
FoxP3
12.4
16.4
21.5
CD25
10.2
15.2
19.7
ICOS
B
αICOSL
–
hcMSCVeh
hcMSCIL-1β
hcMSCVeh
hcMSCIL-1β
FoxP3
15.0
22.8
28.5
20.8
21.9
CD25

【Fig. 20】


4% DSS-water
sacrifice
D0
D1
D3
D10

【Fig. 21】


15
10
5
0
Colon length (cm)
Con
PBS
hcMSC^ICOSL
DSS
Con
PBS
hcMSC^ICOSL
DSS