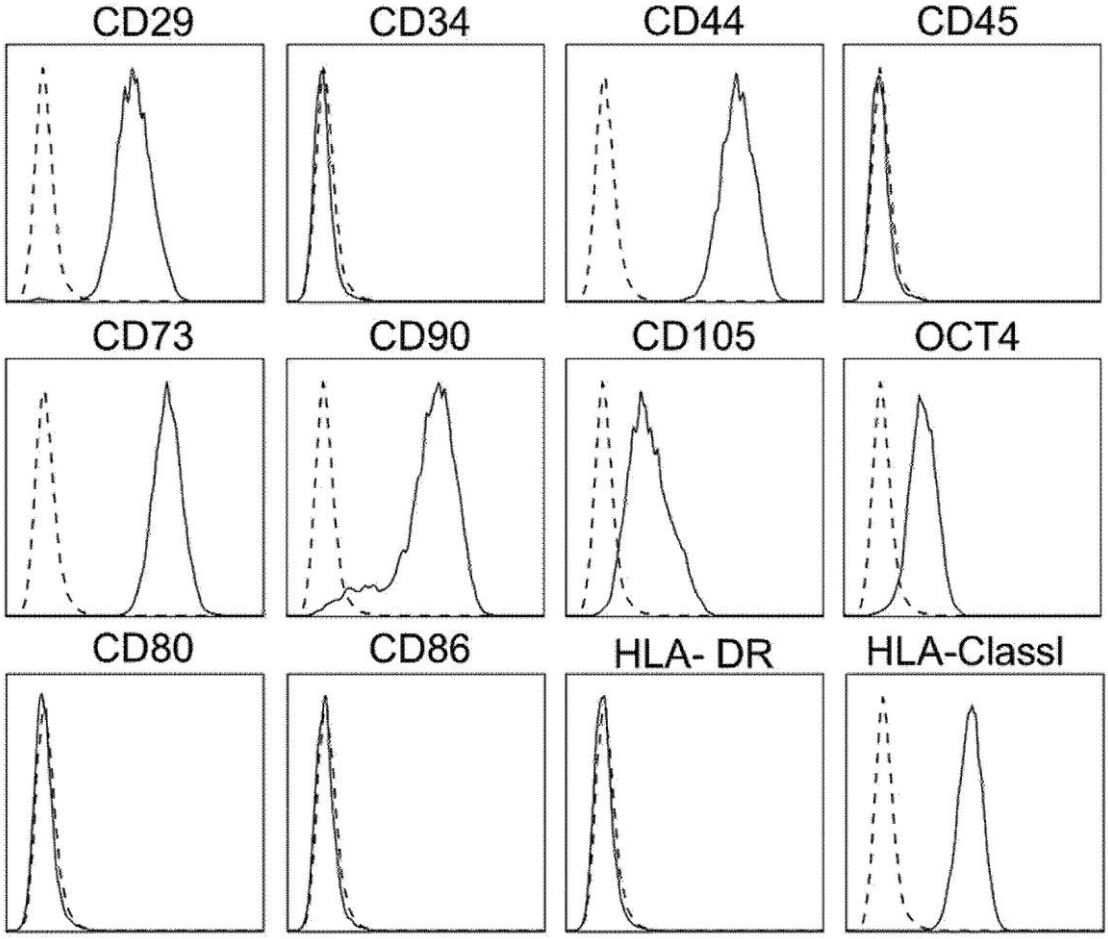
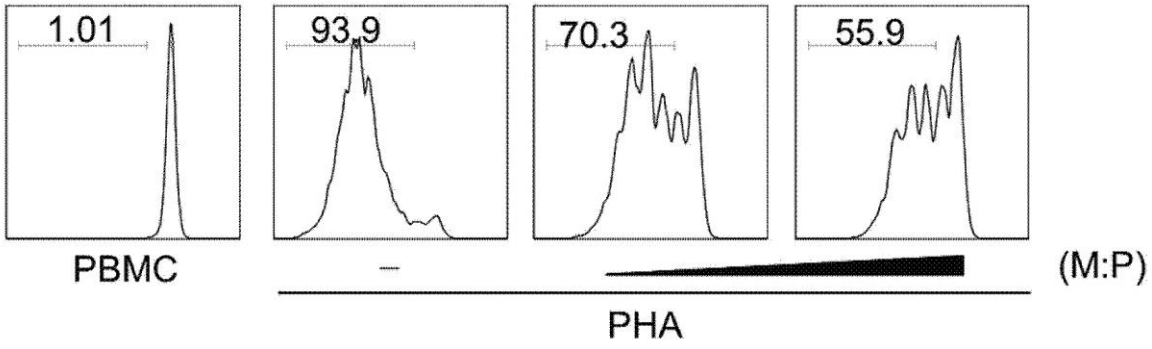
【Fig. 1】

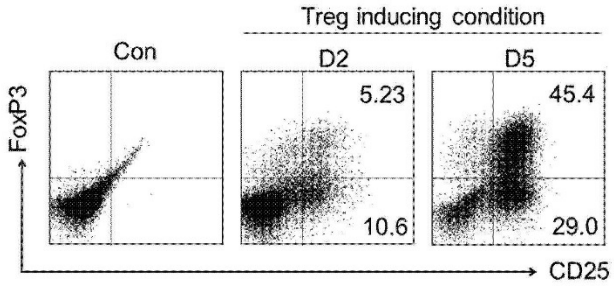

CD29
CD34
CD44
CD45
CD73
CD90
CD105
OCT4
CD80
CD86
HLA- DR
HLA-ClassI

【Fig. 2】

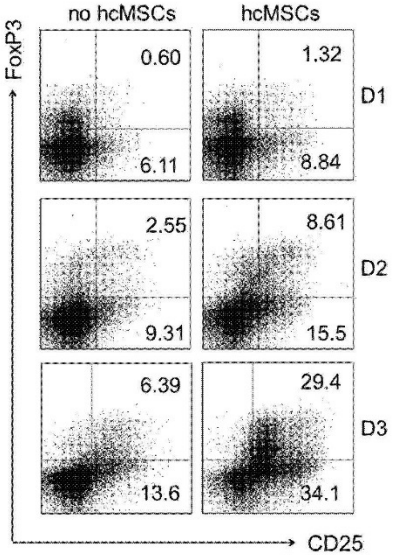

1.01
93.9
70.3
55.9
PBMC
—
(M:P)
PHA

【Fig. 3】

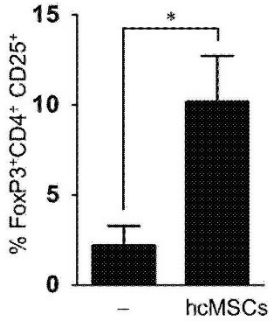
A



B

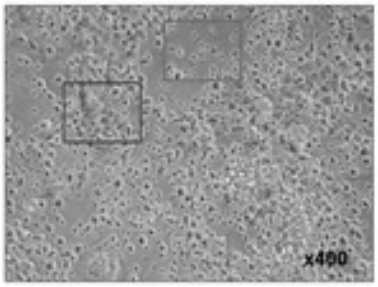


C

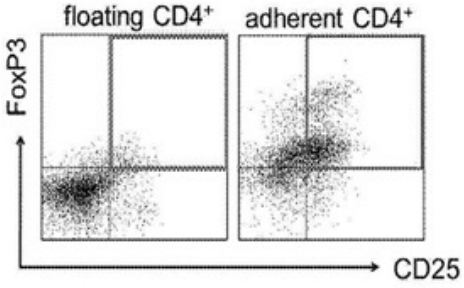


【Fig. 4】

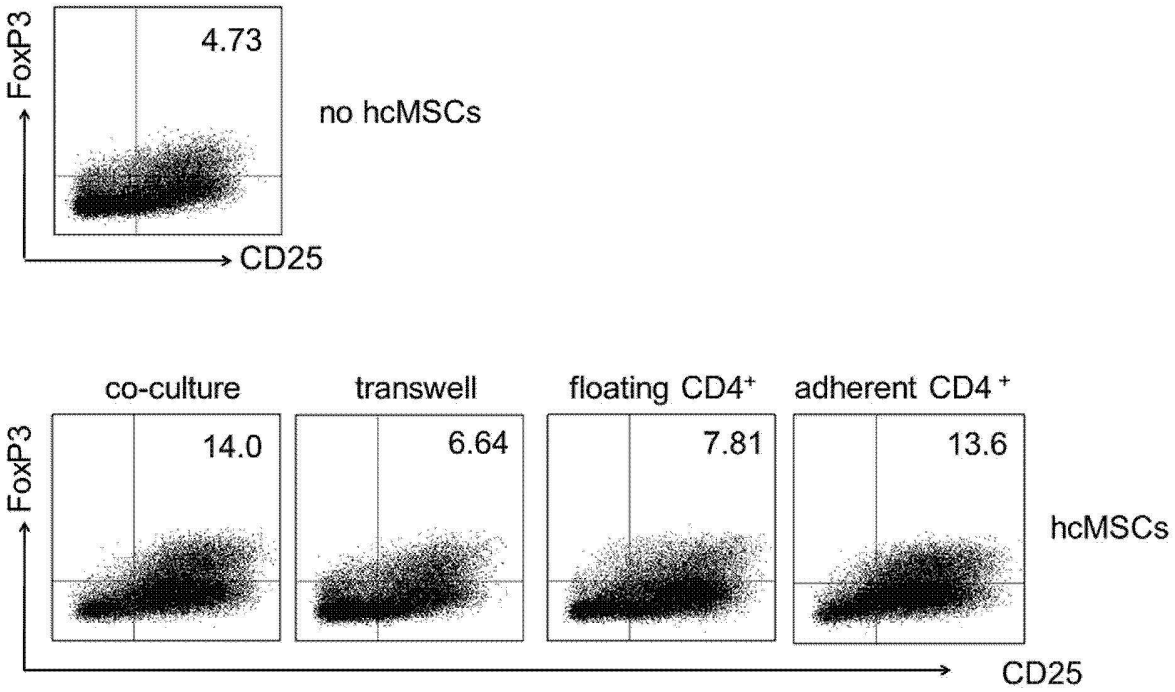
A



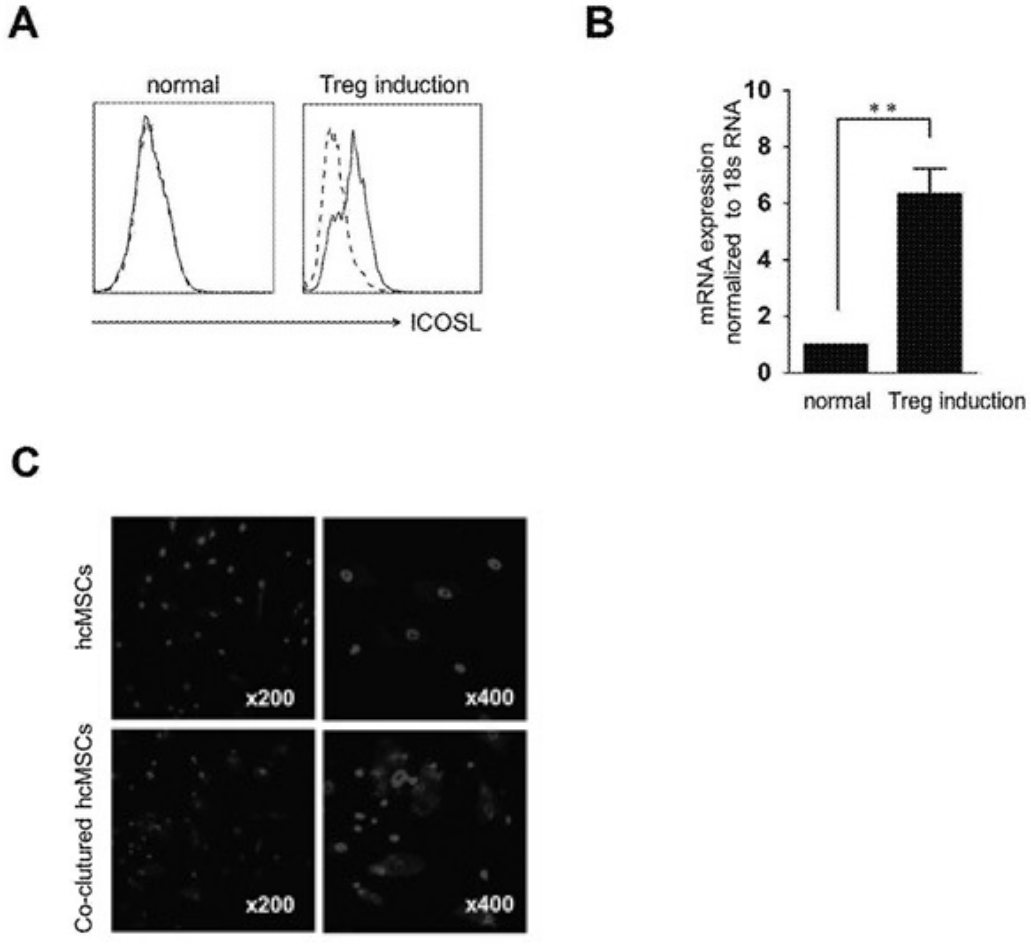
B



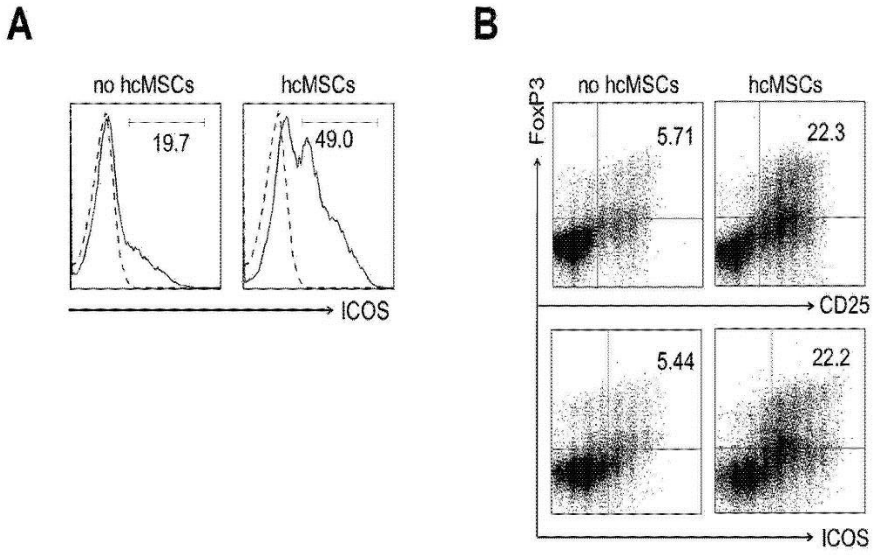
【Fig. 5】


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

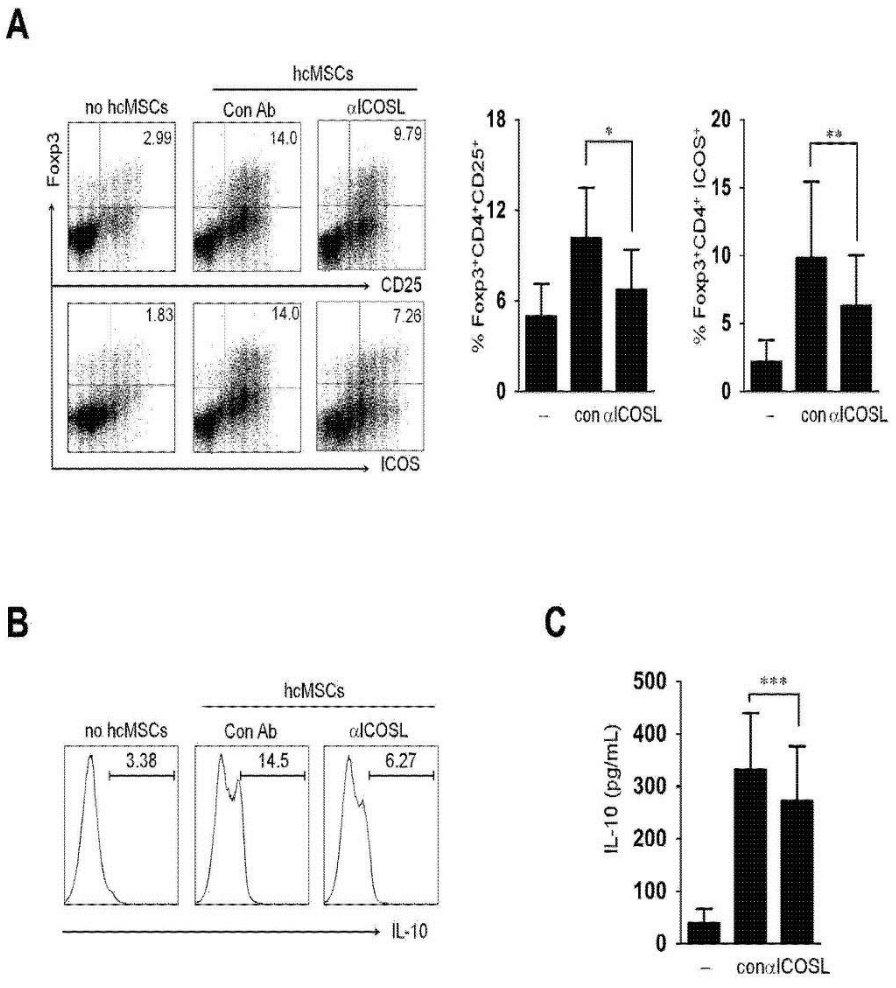
【Fig. 6】


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

【Fig. 7】

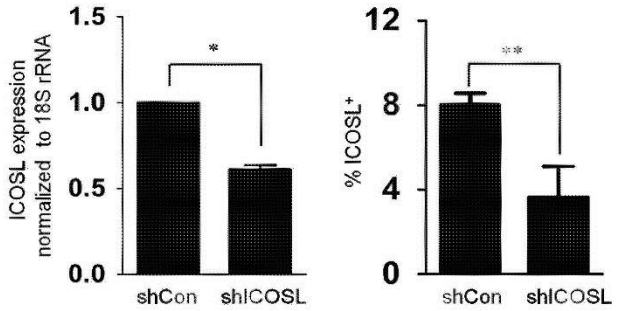

A
no hcMSCs
hcMSCs
19.7
49.0
ICOS
B
FoxP3
no hcMSCs
hcMSCs
5.71
22.3
CD25
5.44
22.2
ICOS

【Fig. 8】

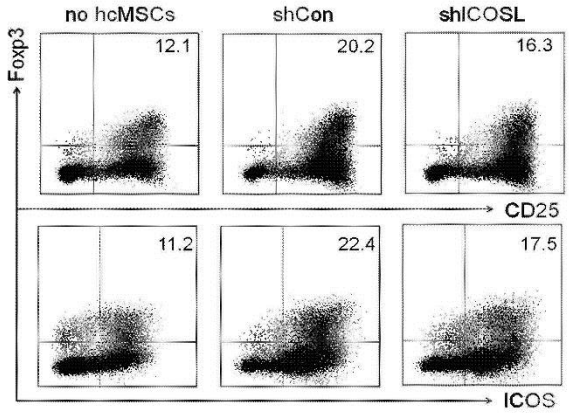

A
hcMSCs
no hcMSCs
Con Ab
αICOSL
Foxp3
2.99
14.0
9.79
CD25
1.83
14.0
7.26
ICOS
% Foxp3+CD4+CD25+
18
12
6
0
*
– con αICOSL
% Foxp3+CD4+ ICOS+
20
15
10
5
0
**
– con αICOSL
B
hcMSCs
no hcMSCs
Con Ab
αICOSL
3.38
14.5
6.27
IL-10
C
IL-10 (pg/mL)
500
400
300
200
100
0
***
– conαICOSL

【Fig. 9】

A

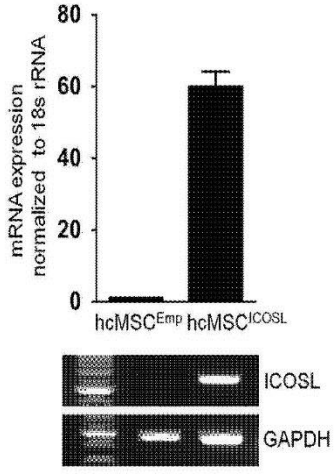


B

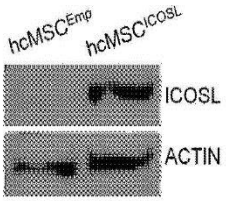


【Fig. 10】

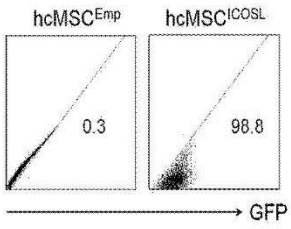
A



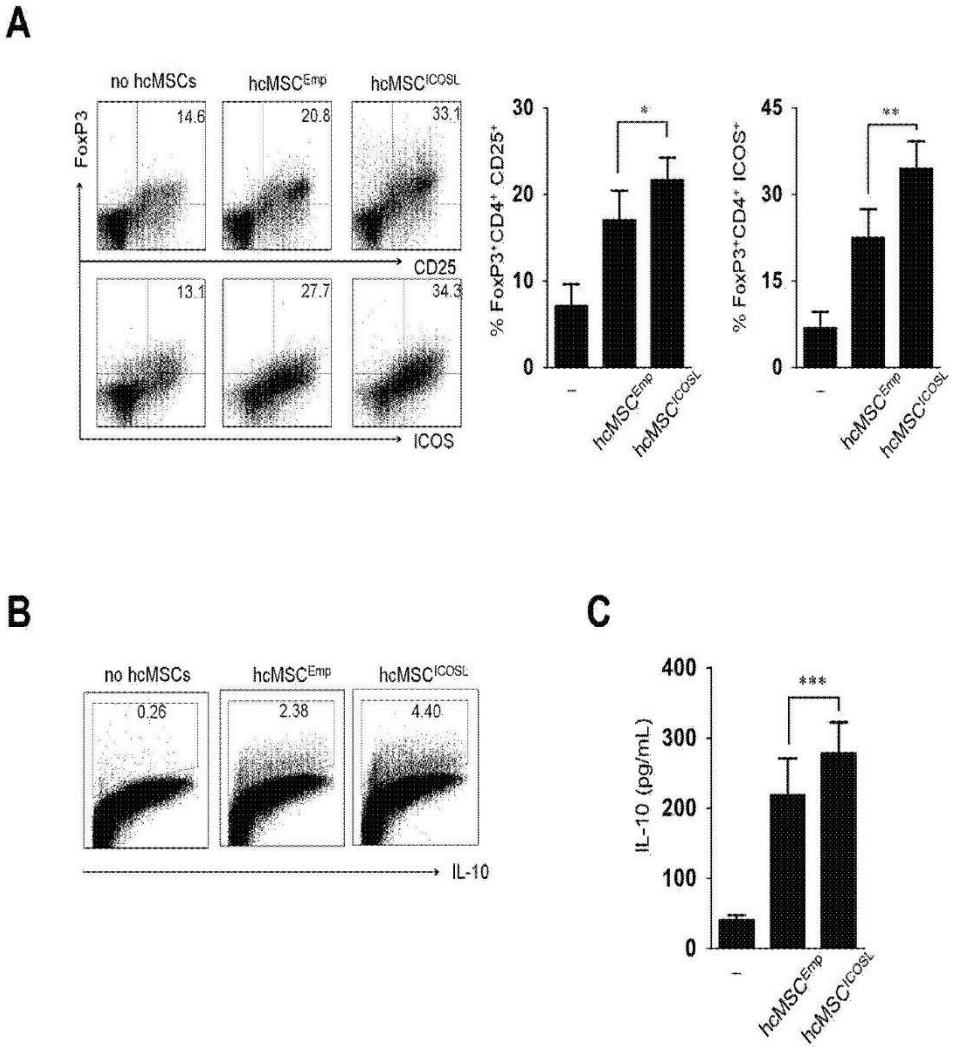
B



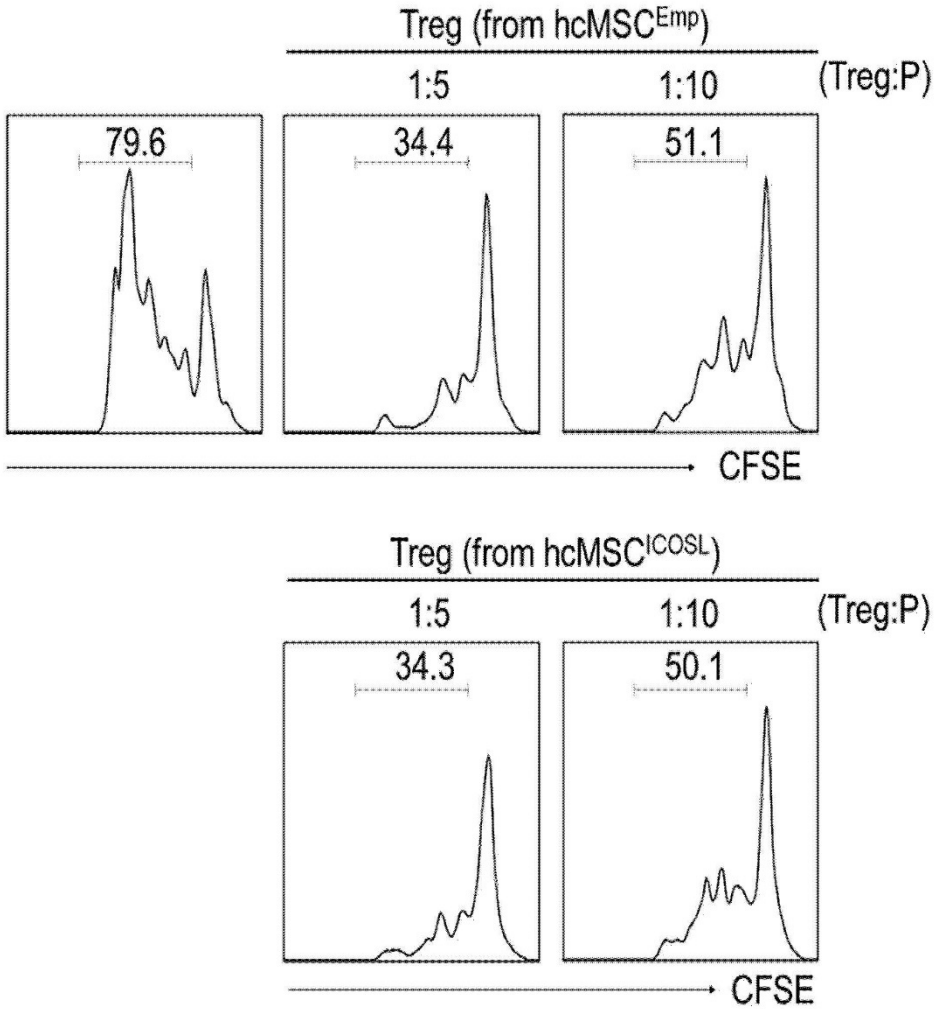
C



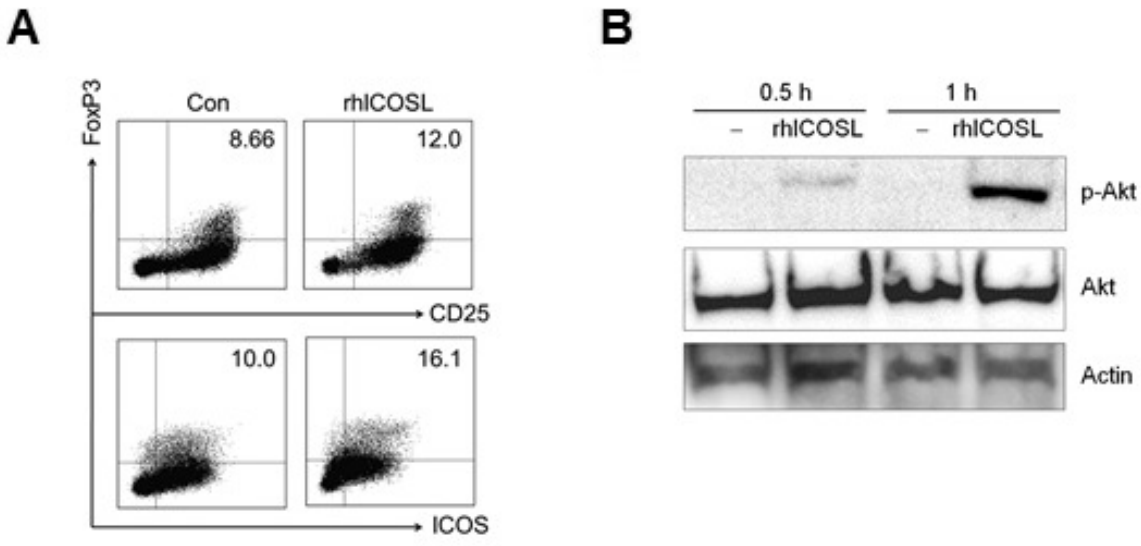
【Fig. 11】


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

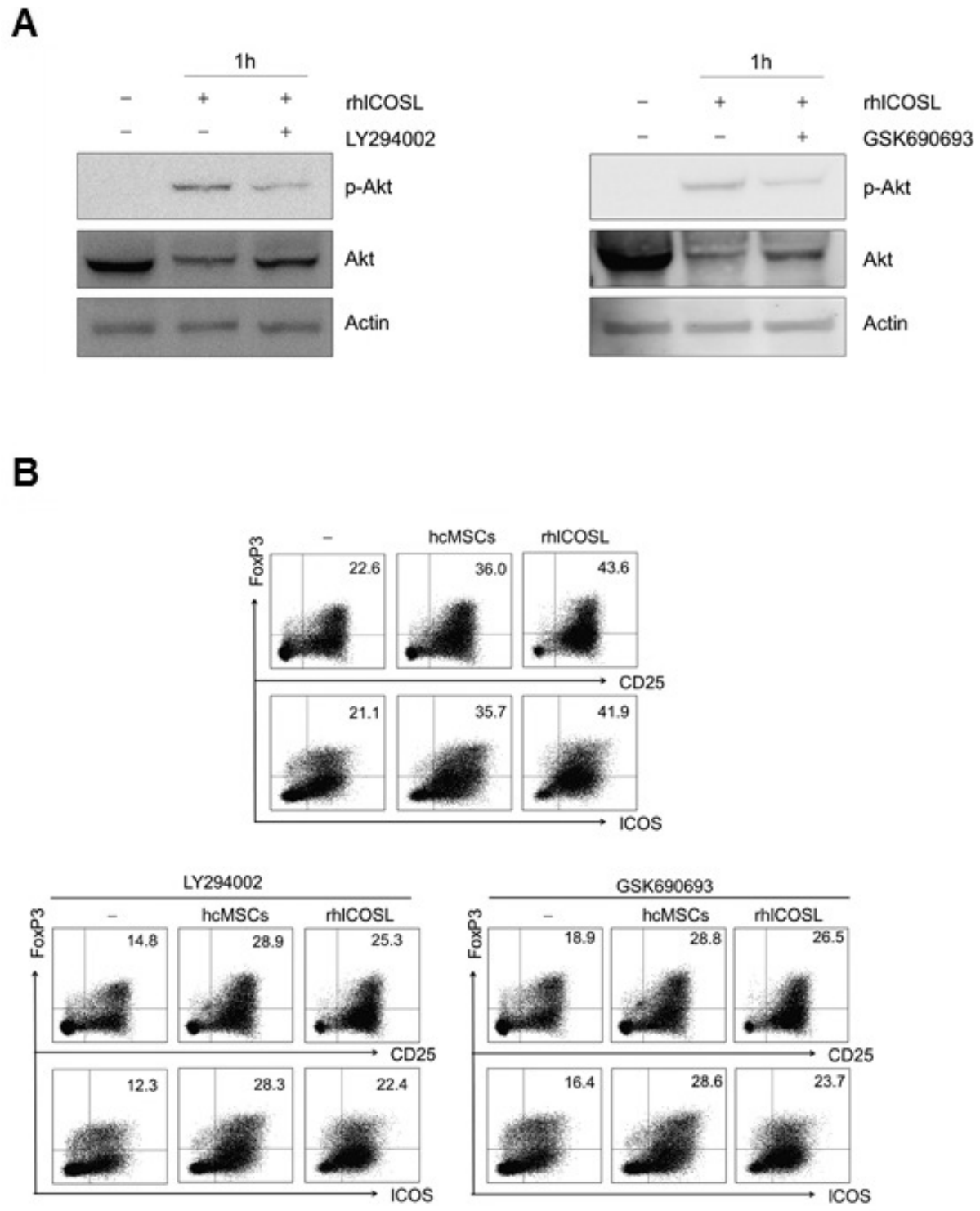
【Fig. 12】


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

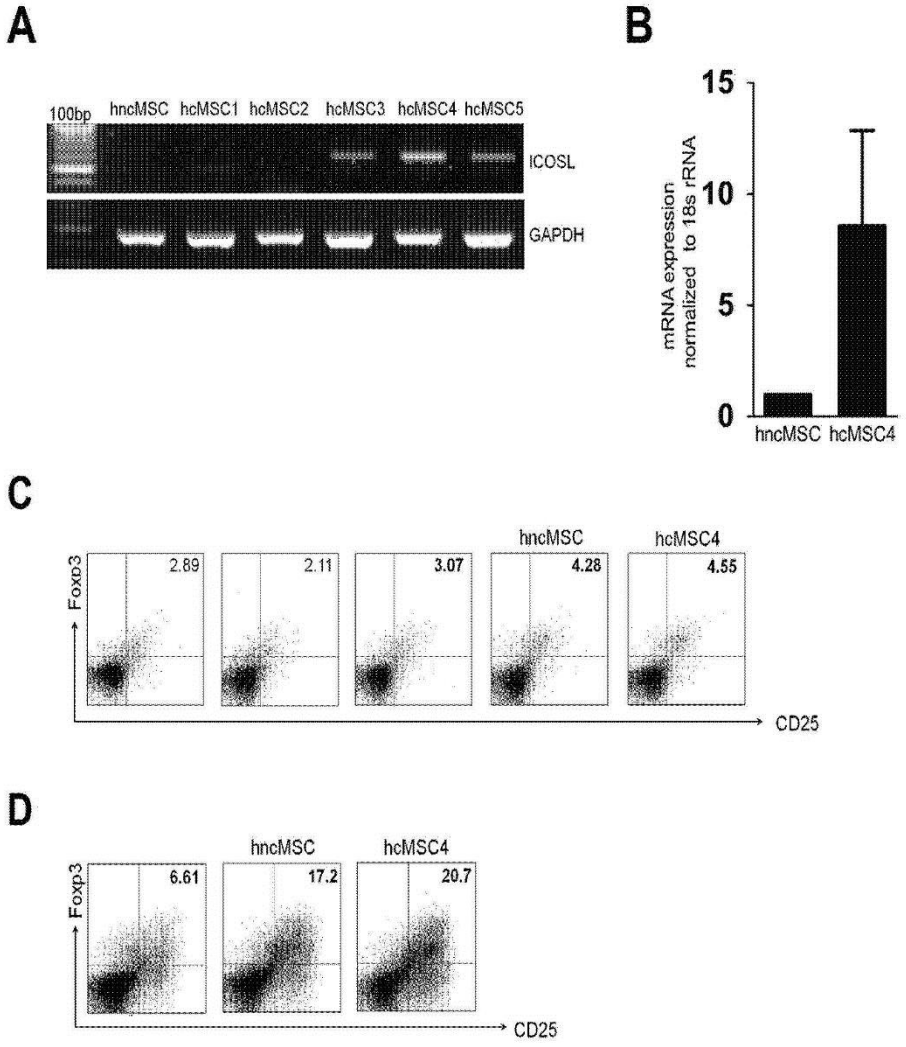
【Fig. 13】


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

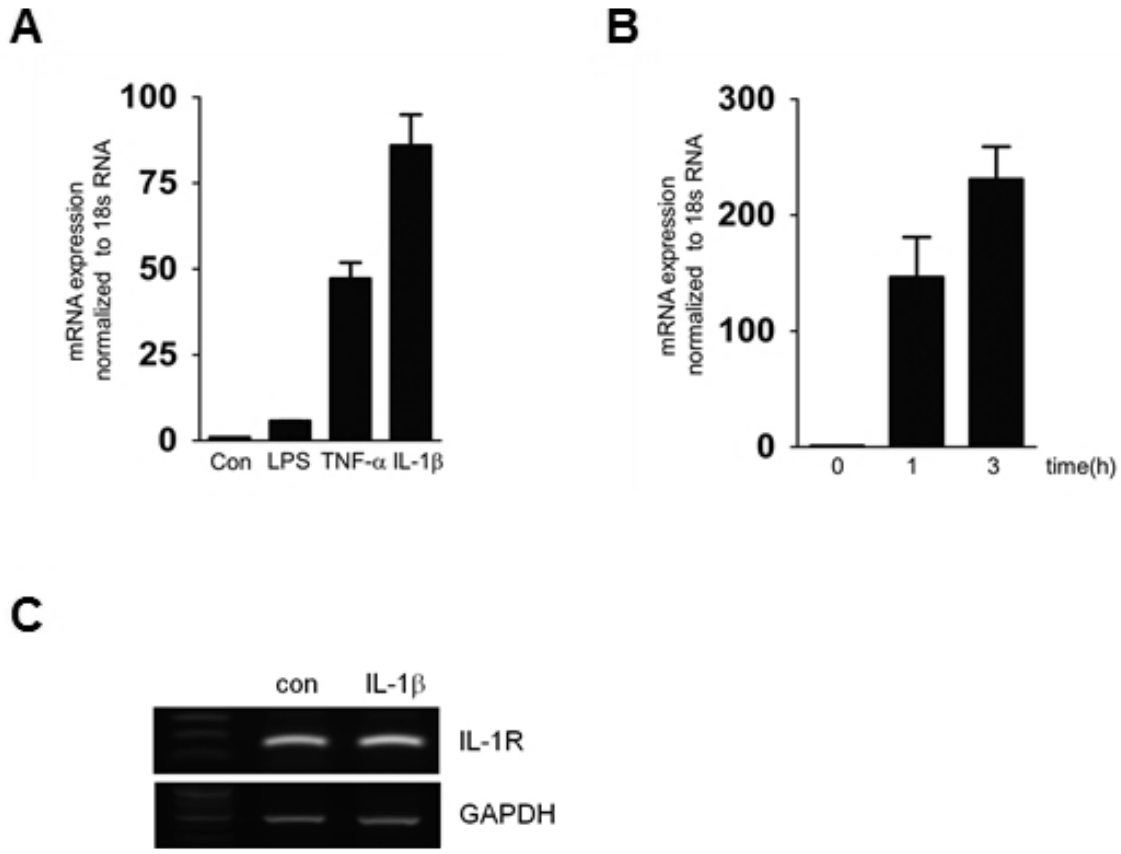
【Fig. 14】


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

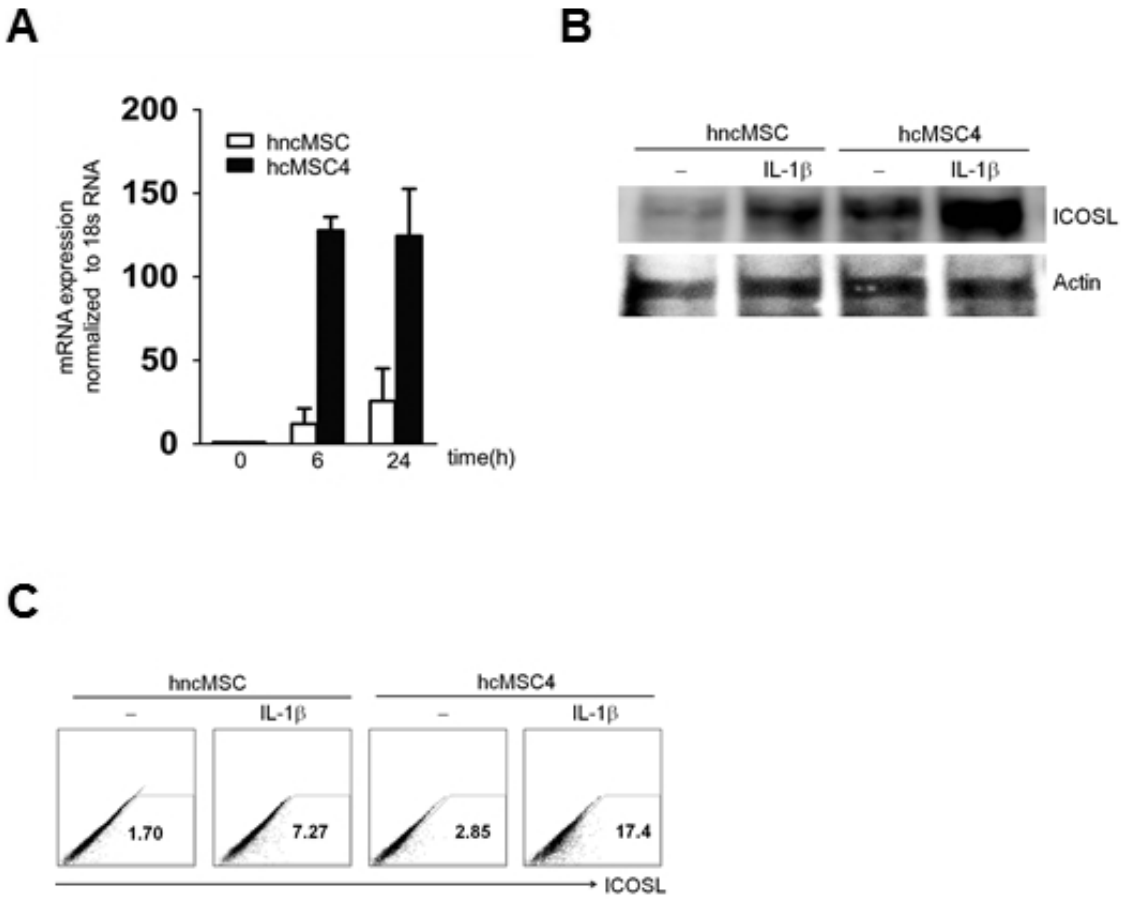
【Fig. 15】


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

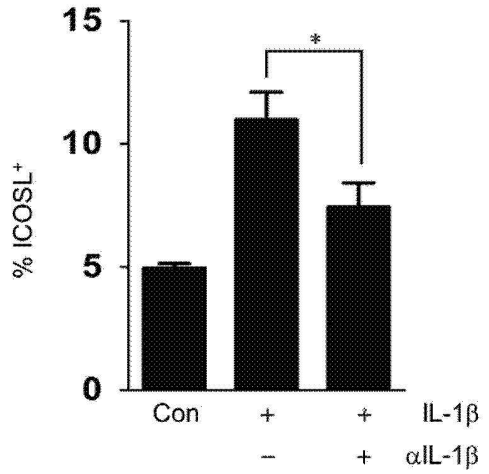
【Fig. 16】


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

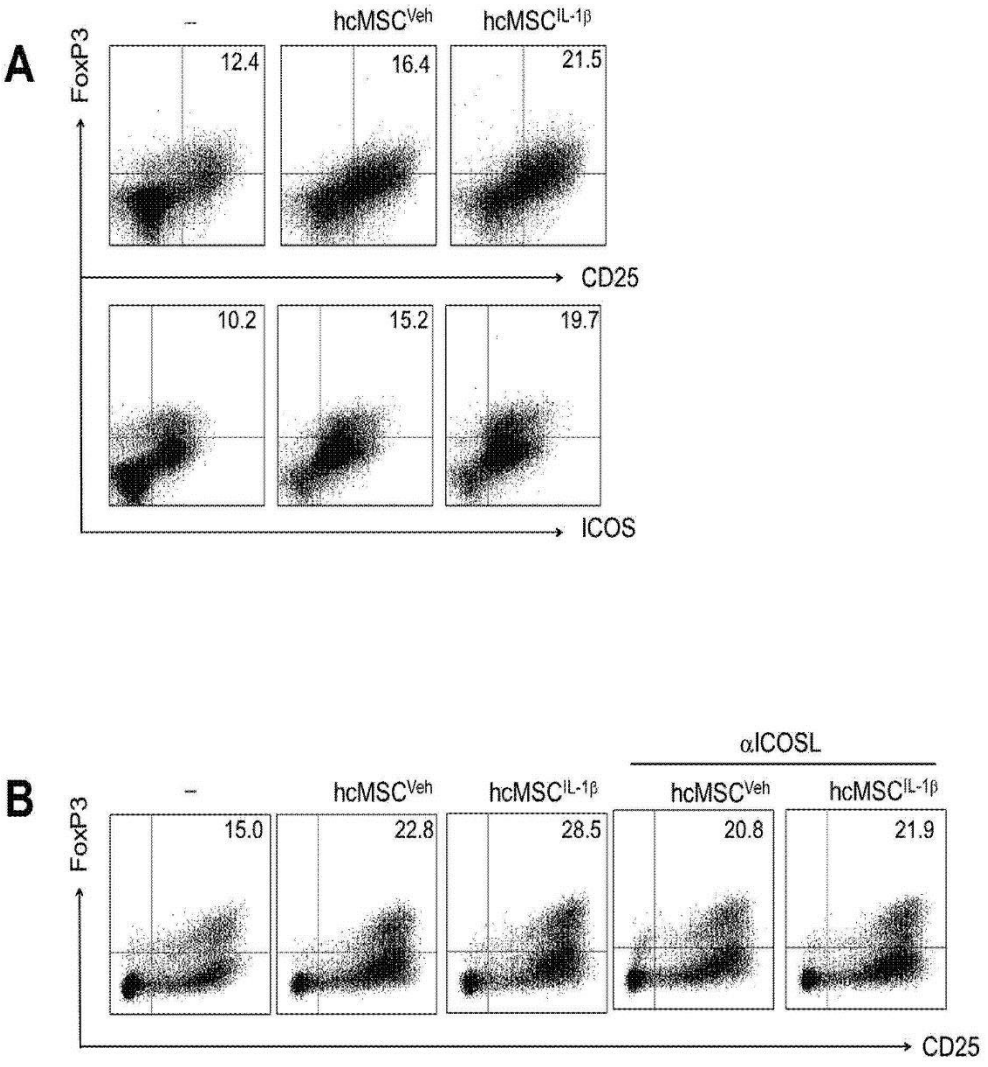
【Fig. 17】


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

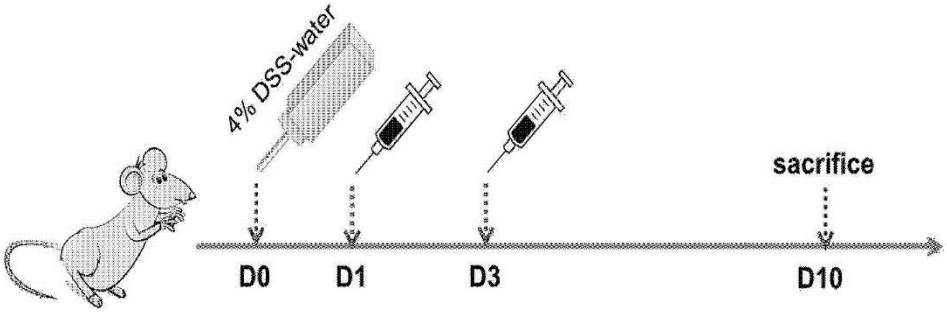
【Fig. 18】


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

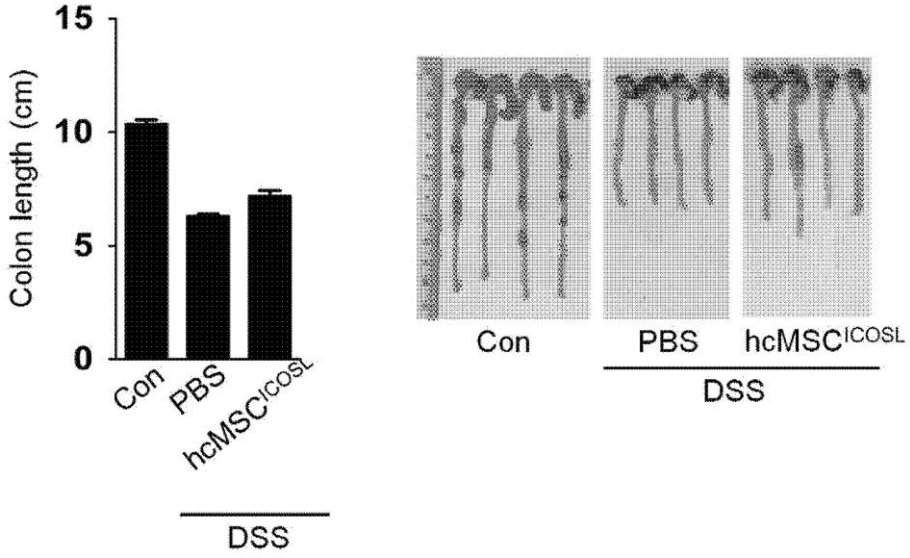
【Fig. 19】


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