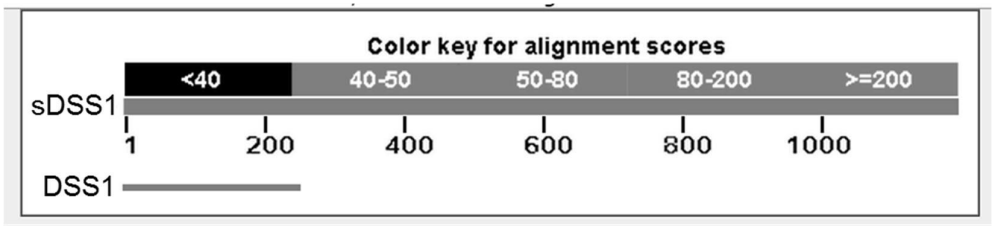

Up: *sDSS1* cDNA (Homo sapiens , whole sequence);
Down: *DSS1* cDNA (Homo sapiens , part sequence).

Fig.1A

Fig.1B

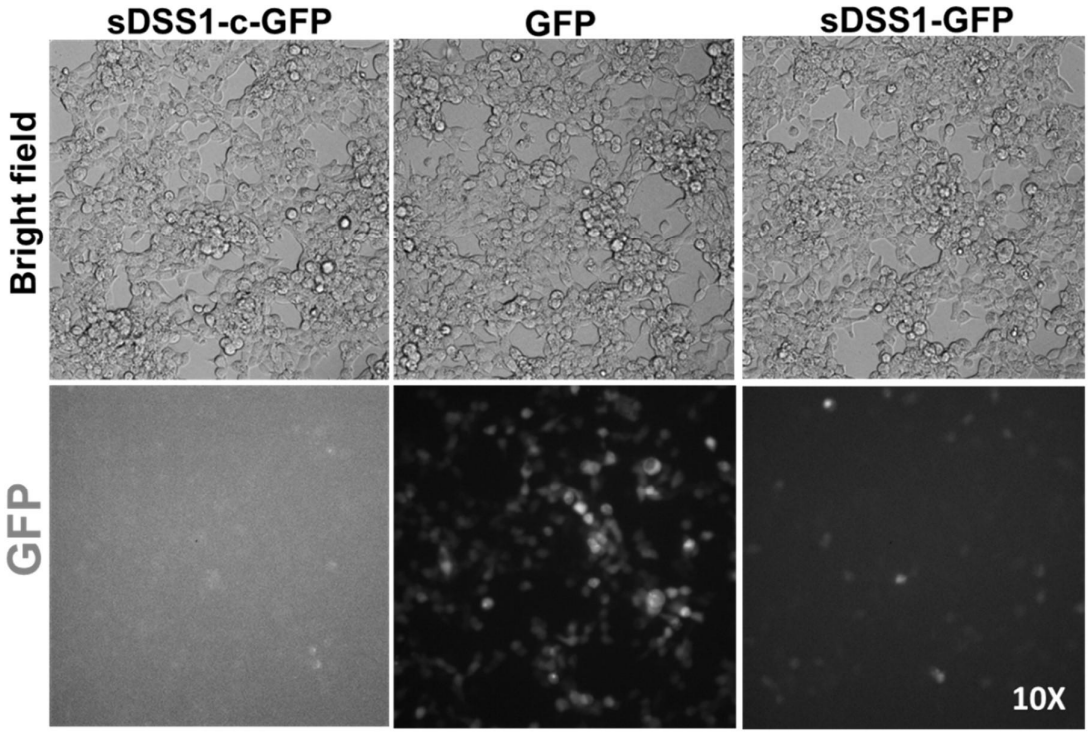

Fig.2A

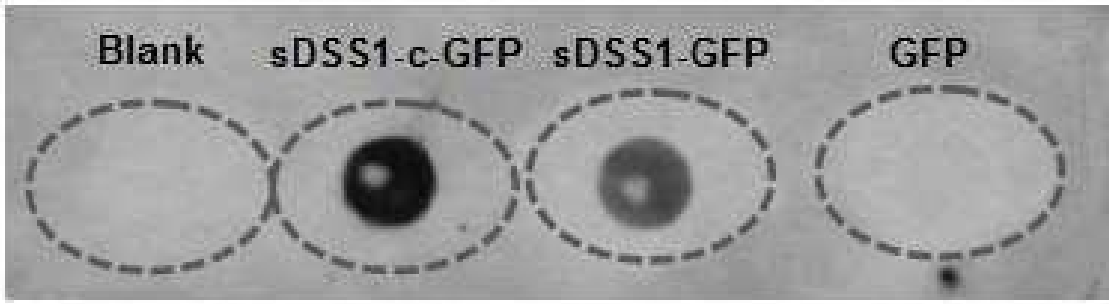
Blank
sDSS1-c-GFP
sDSS1-GFP
GFP
Primary antibody: mouse-anti-GFP

Fig.2B

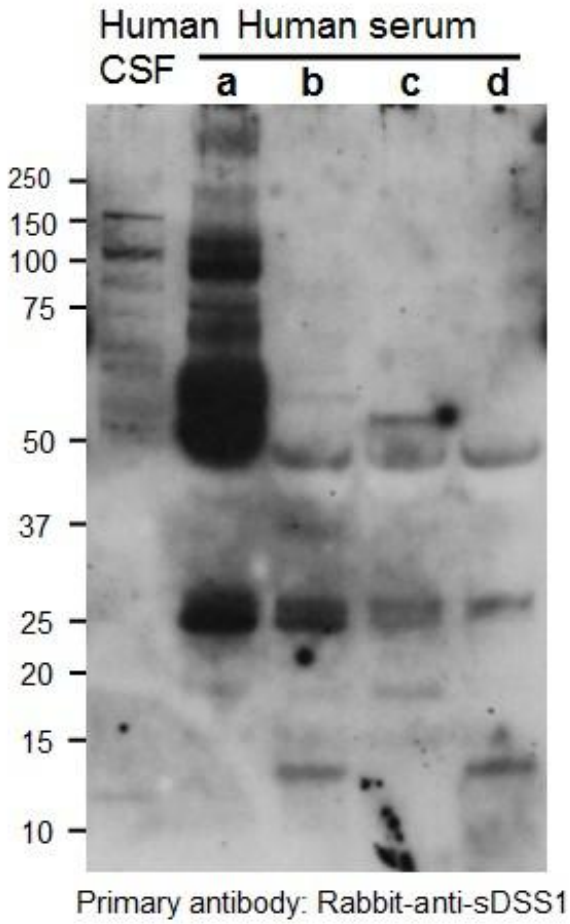
Human CSF
Human serum
a
b
c
d
250
150
100
75
50
37
25
20
15
10
Primary antibody: Rabbit-anti-sDSS1

Fig.3A

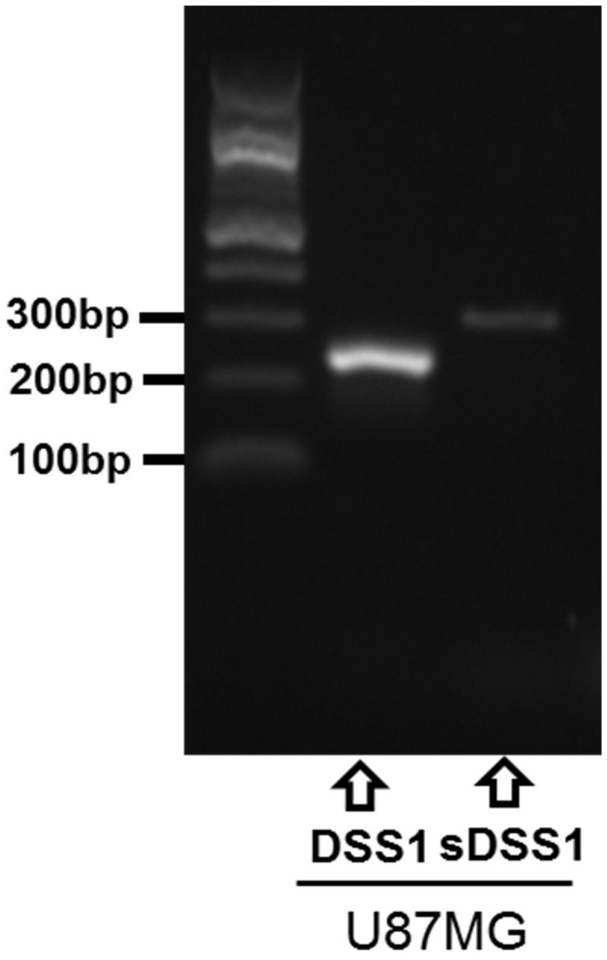

Fig.3B

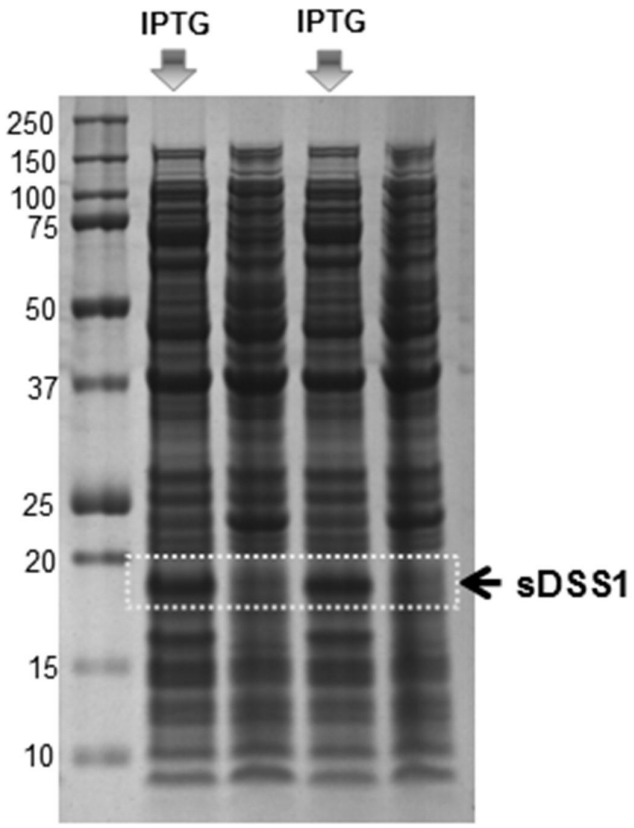

Fig.4A

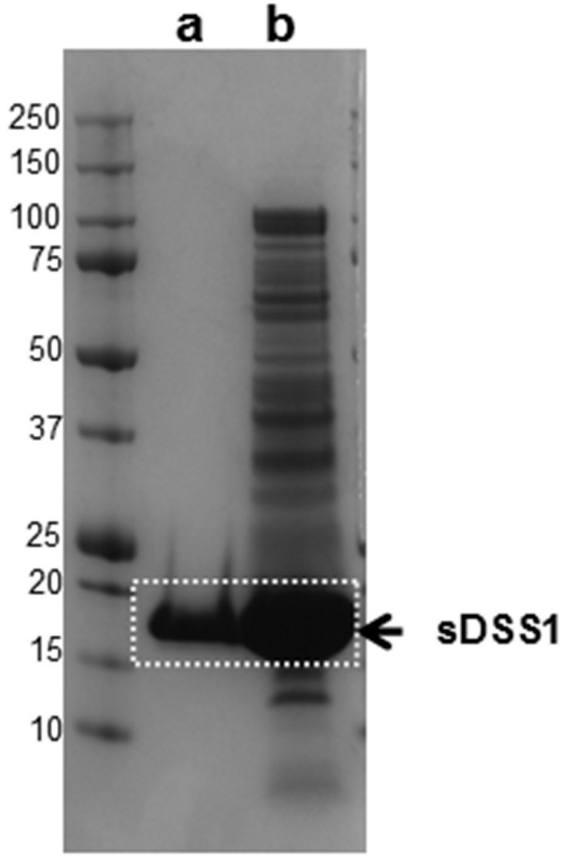

Fig.4B

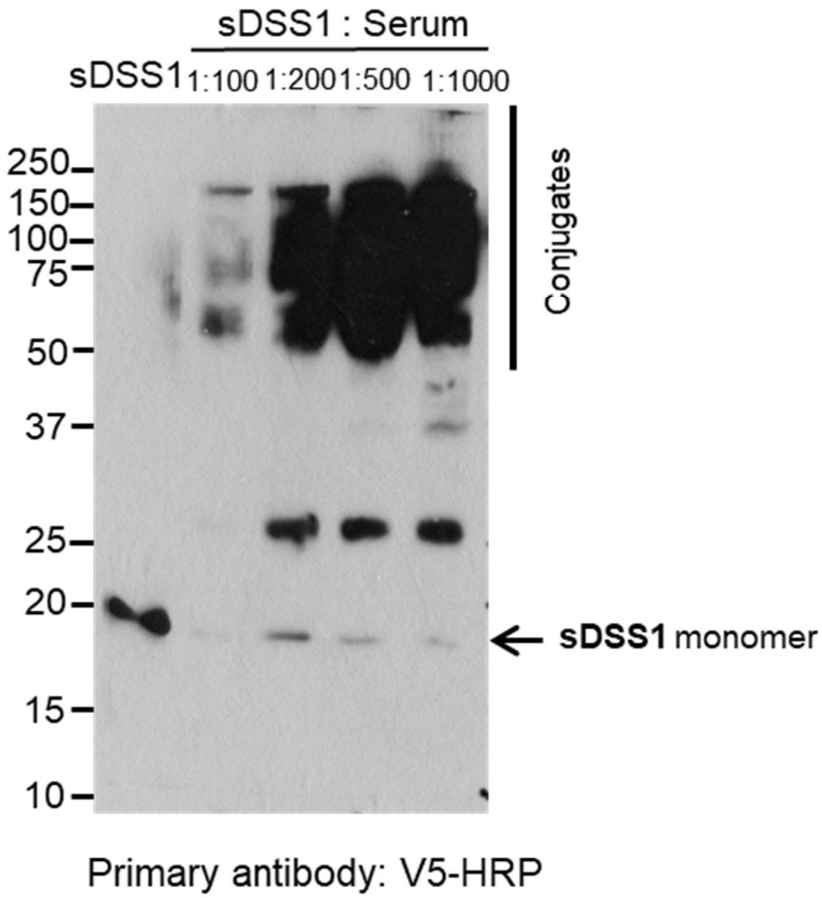
sDSS1 : Serum
sDSS1
1:100
1:200
1:500
1:1000
250
150
100
75
50
37
25
20
15
10
Conjugates
sDSS1 monomer
Primary antibody: V5-HRP

Fig.5A

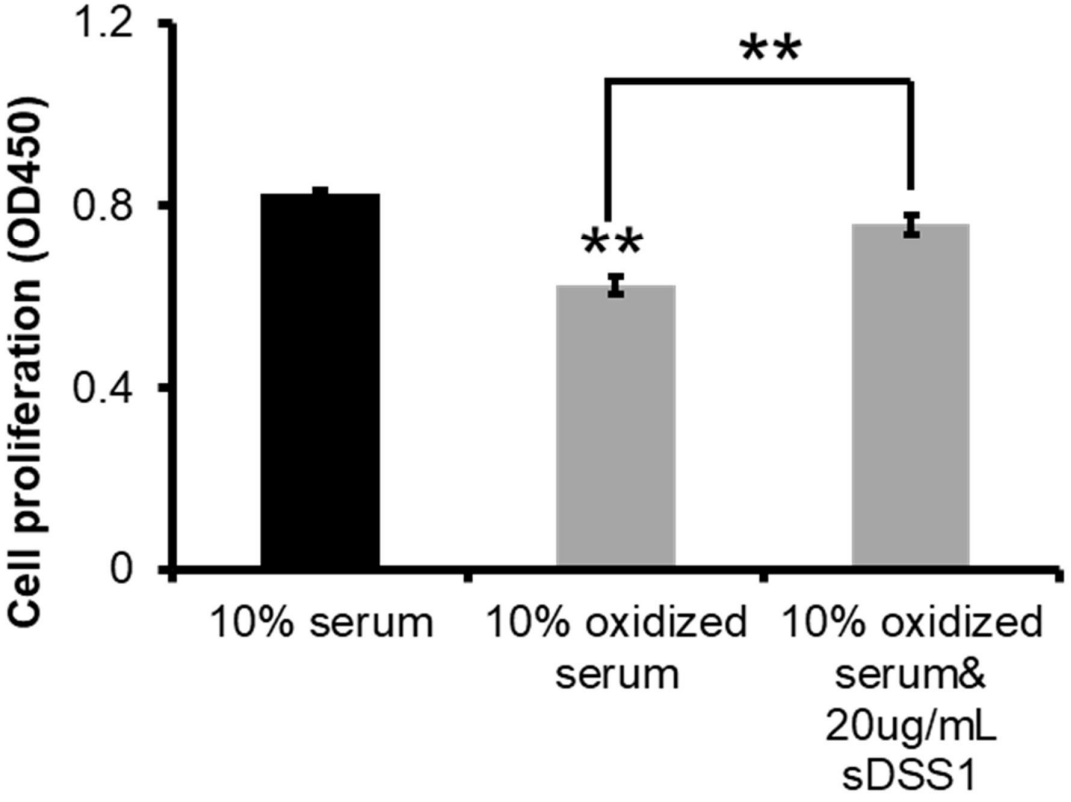
1.2
0.8
0.4
0
Cell proliferation (OD450)
**
**
10% serum
10% oxidized serum
10% oxidized serum& 20ug/mL sDSS1

Fig.5B

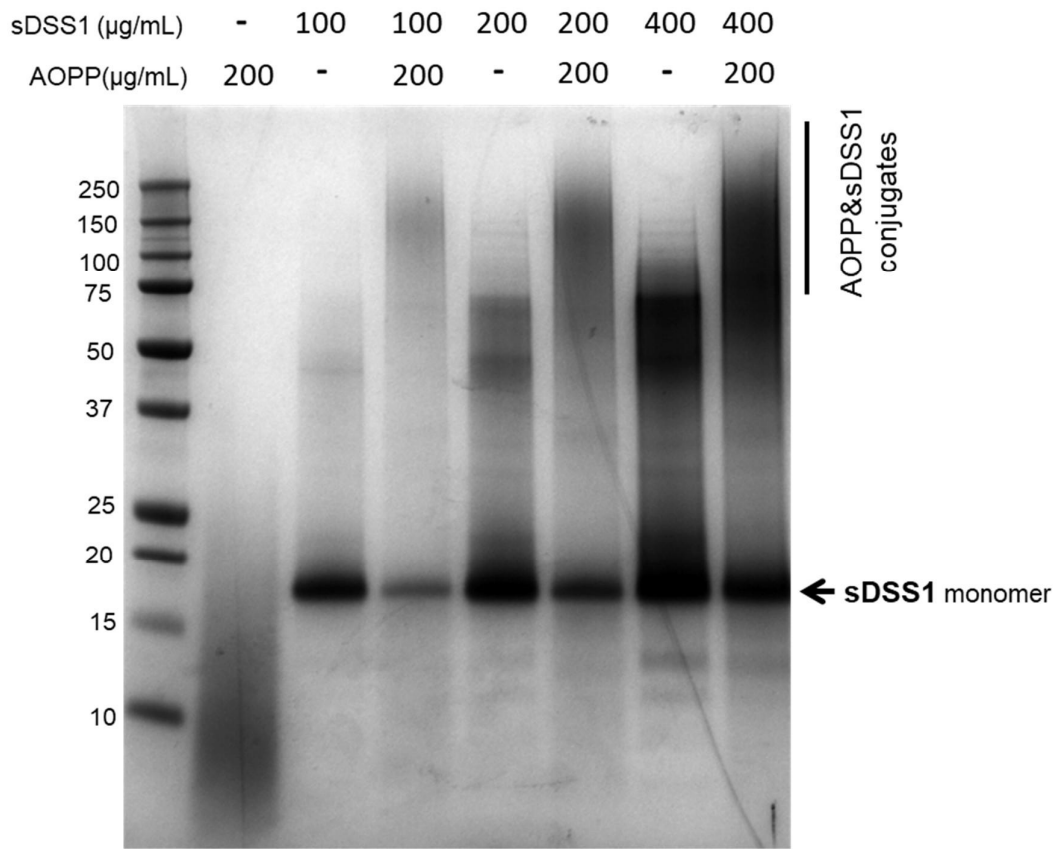
sDSS1 (μg/mL) - 100 100 200 200 400 400
AOPP(μg/mL) 200 - 200 - 200 - 200
250
150
100
75
50
37
25
20
15
10
AOPP&sDSS1 conjugates
sDSS1 monomer

Fig.5C

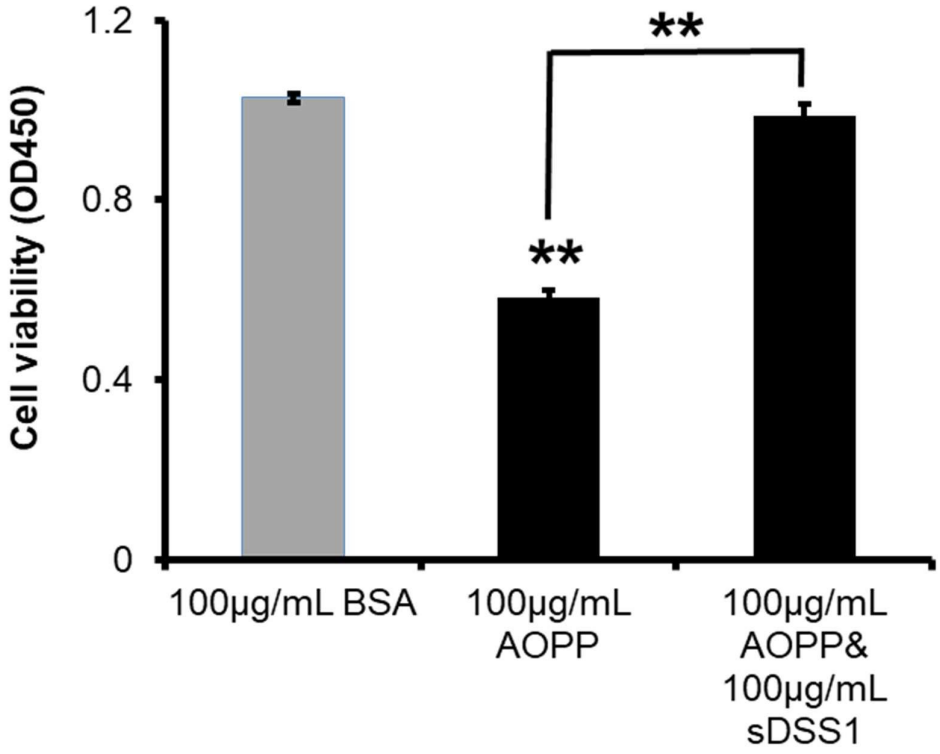
1.2
0.8
0.4
0
Cell viability (OD450)
**
**
100μg/mL BSA
100μg/mL AOPP
100μg/mL AOPP& 100μg/mL sDSS1

Fig.5D

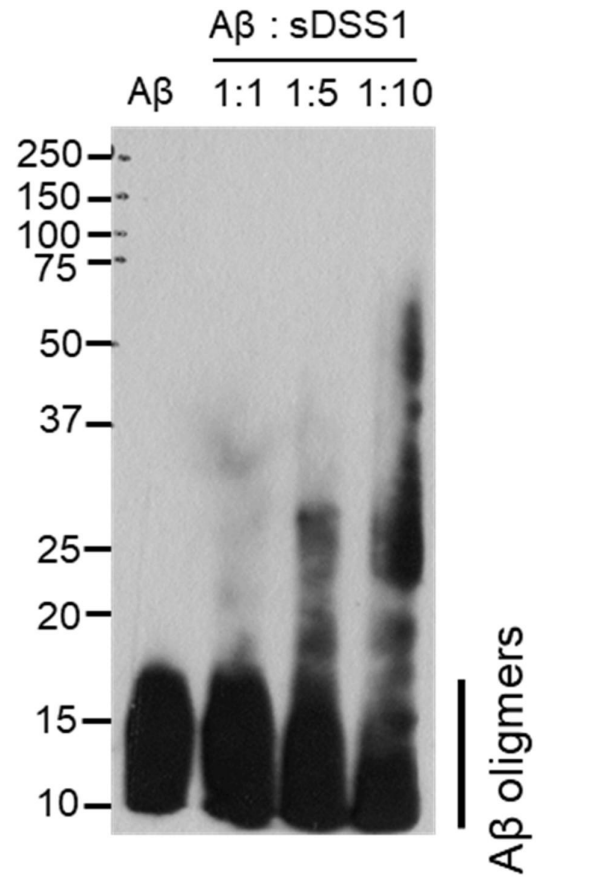
Aβ : sDSS1
Aβ
1:1
1:5
1:10
250
150
100
75
50
37
25
20
15
10
Aβ oligmers
Primary antibody: Rabbit-anti-Aβ

Fig.6A

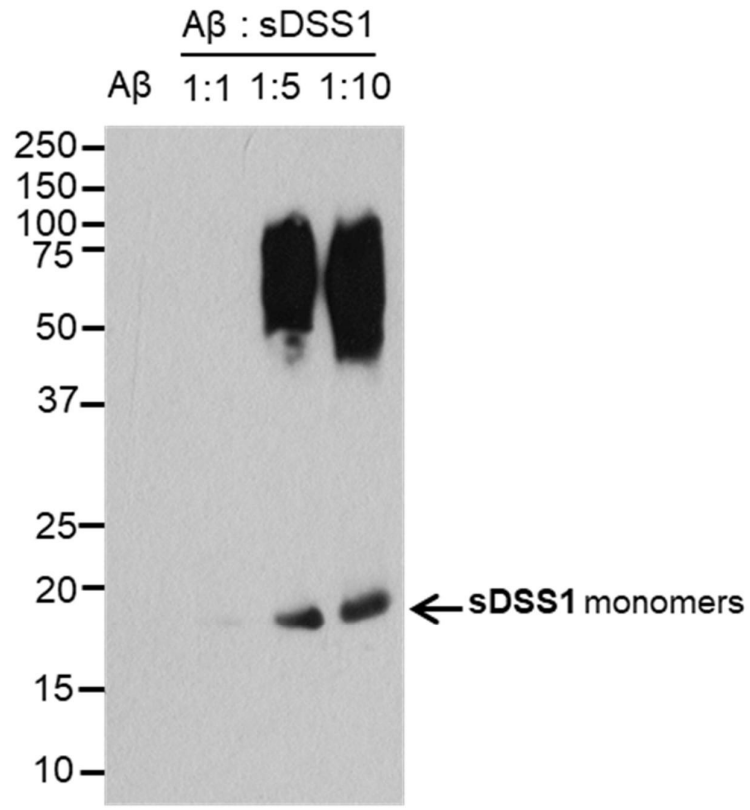
Aβ : sDSS1
Aβ
1:1
1:5
1:10
250
150
100
75
50
37
25
20
15
10
sDSS1 monomers
Primary antibody: V5-HRP

Fig.6B

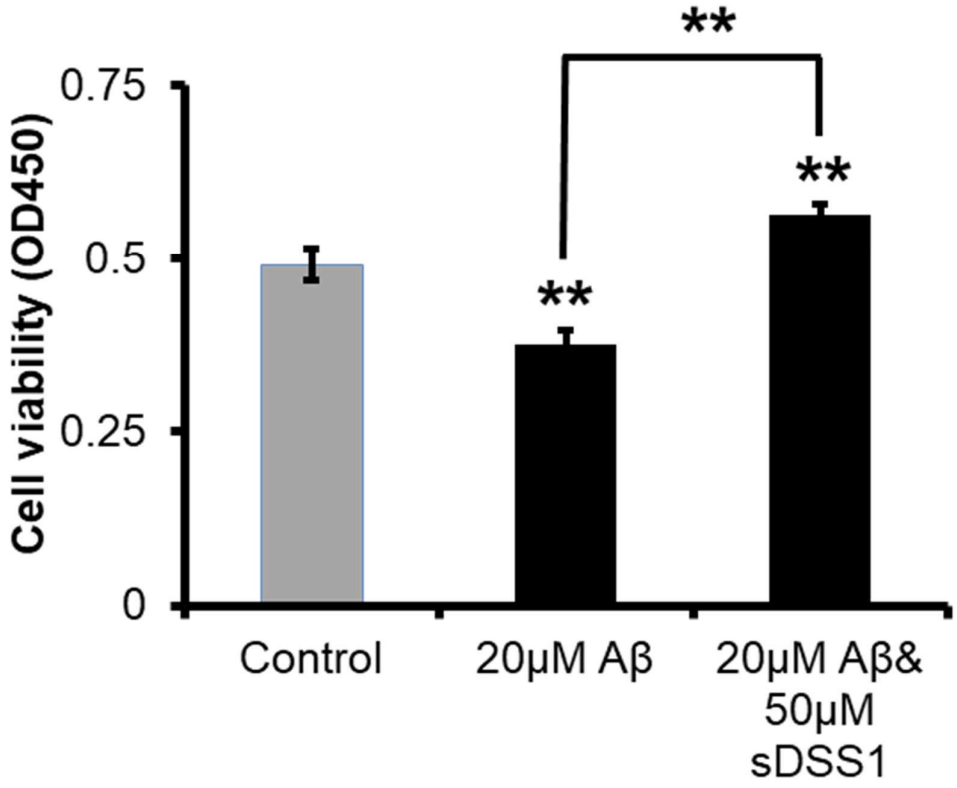
**
**
**
0.75
0.5
0.25
0
Cell viability (OD450)
Control
20μM Aβ
20μM Aβ&
50μM
sDSS1

Fig.6C

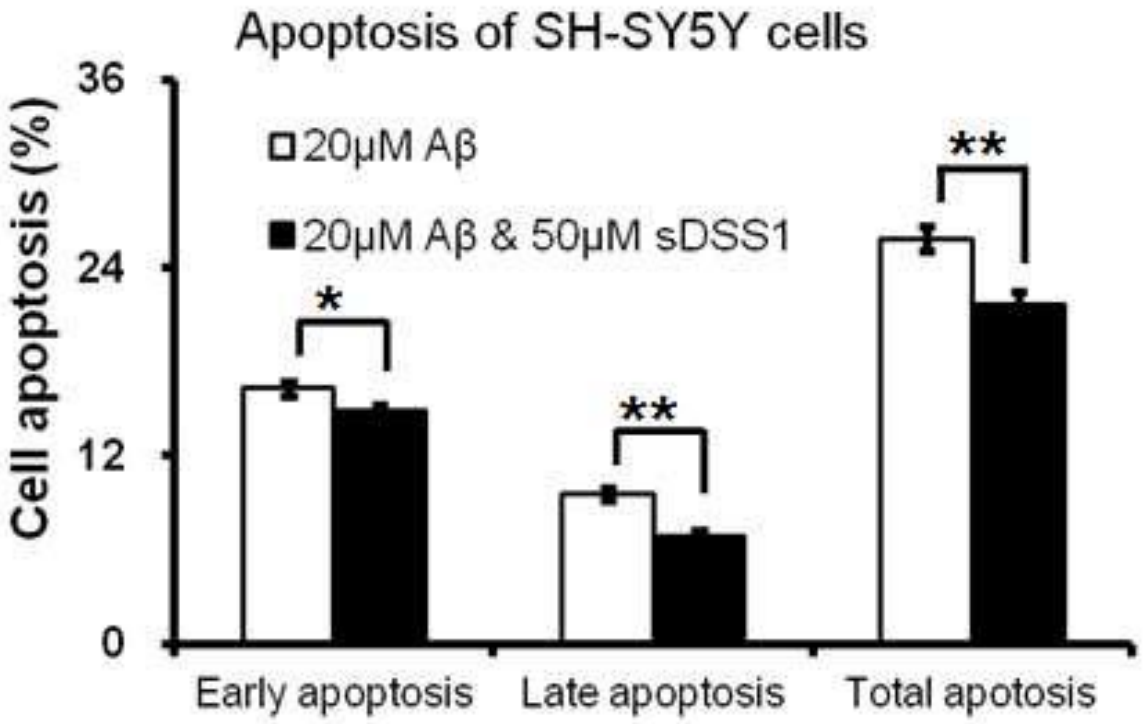
Apoptosis of SH-SY5Y cells
Cell apoptosis (%)
36
24
12
0
20μM Aβ
20μM Aβ & 50μM sDSS1
*
**
**
Early apoptosis
Late apoptosis
Total apotosis

Fig.6D

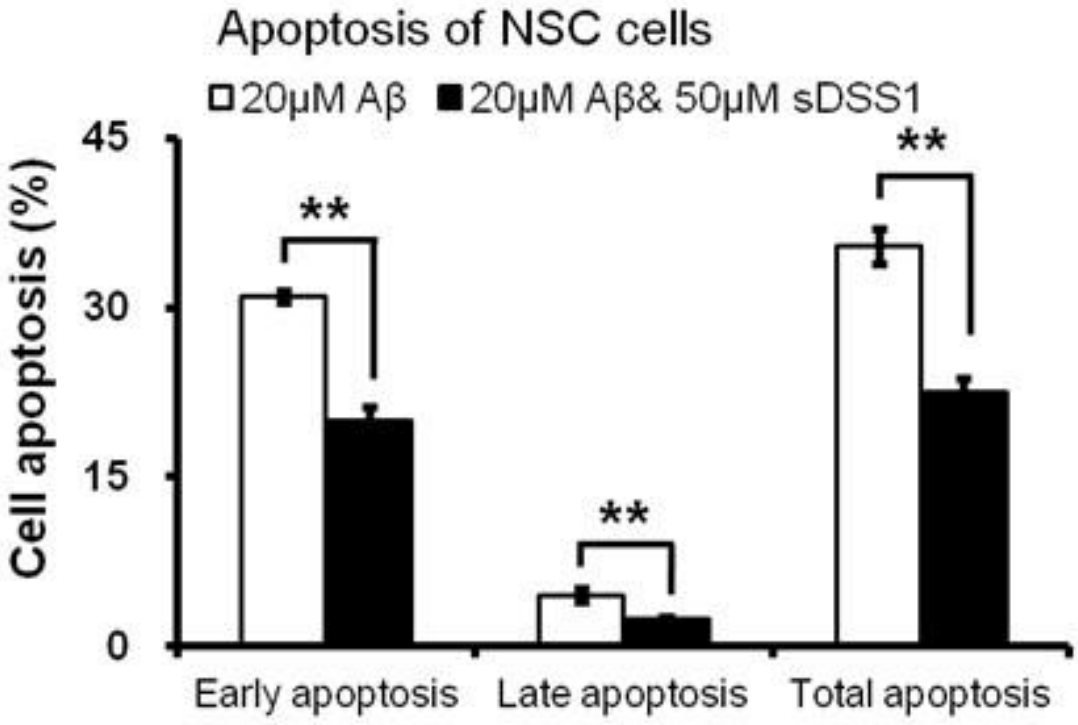
Apoptosis of NSC cells
20μM Aβ
20μM Aβ& 50μM sDSS1
Cell apoptosis (%)
45
30
15
0
**
**
**
Early apoptosis
Late apoptosis
Total apoptosis

Fig.6E

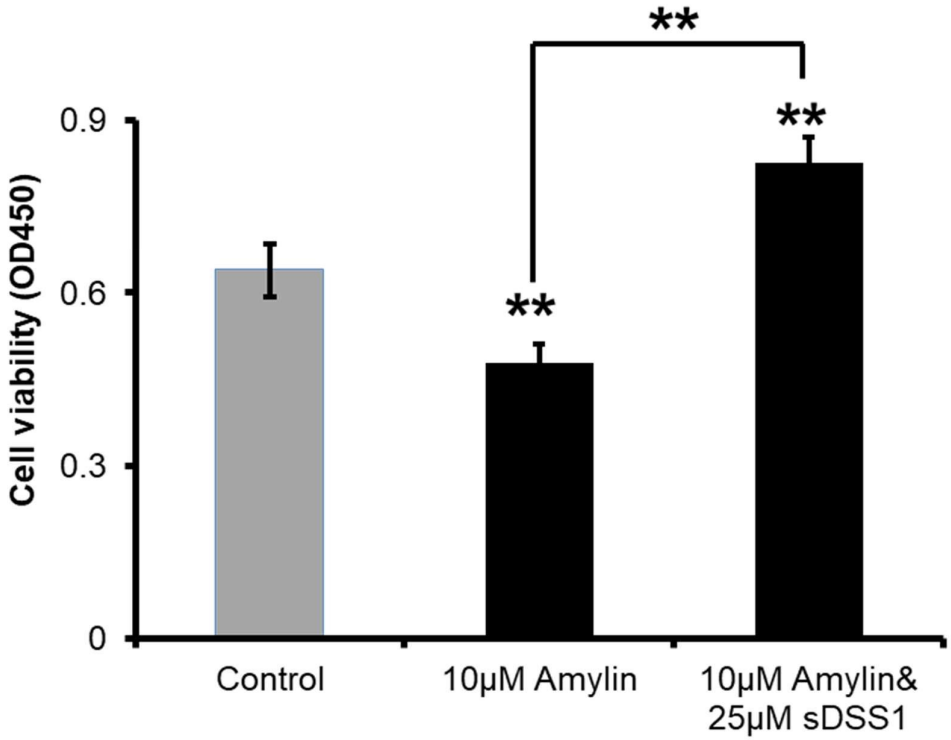
**
**
**
Cell viability (OD450)
0.9
0.6
0.3
0
Control
10μM Amylin
10μM Amylin&
25μM sDSS1

Fig.7

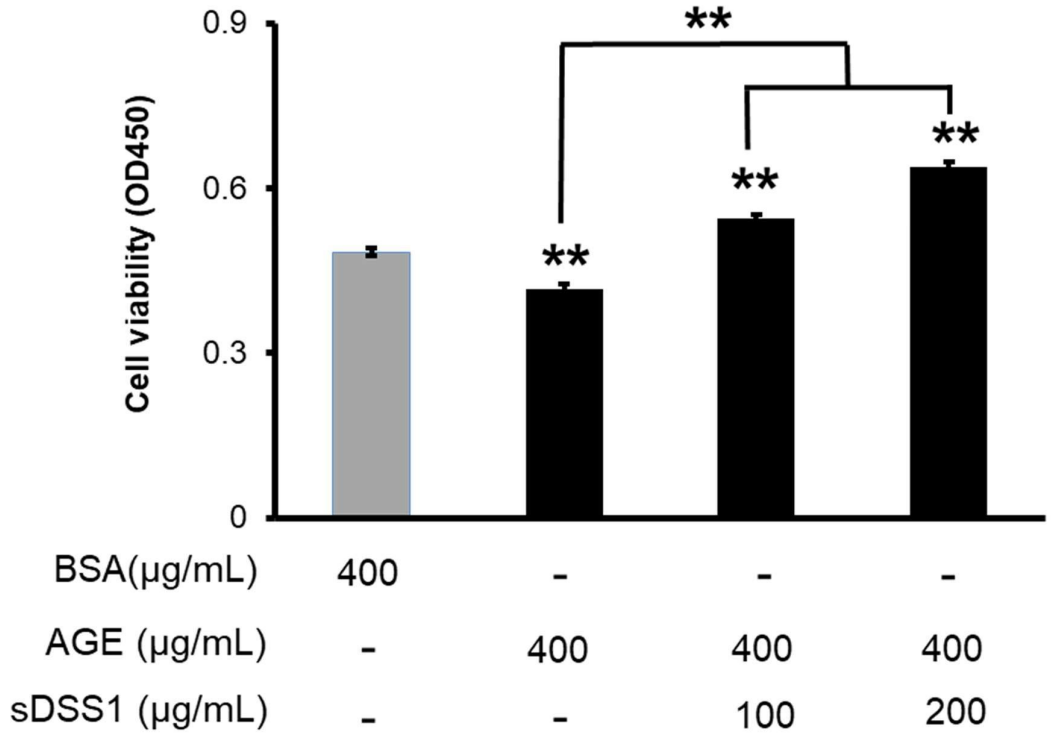
0.9
0.6
0.3
0
Cell viability (OD450)
**
**
**
**
BSA(μg/mL) 400 - - -
AGE (μg/mL) - 400 400 400
sDSS1 (μg/mL) - - 100 200

Fig.8

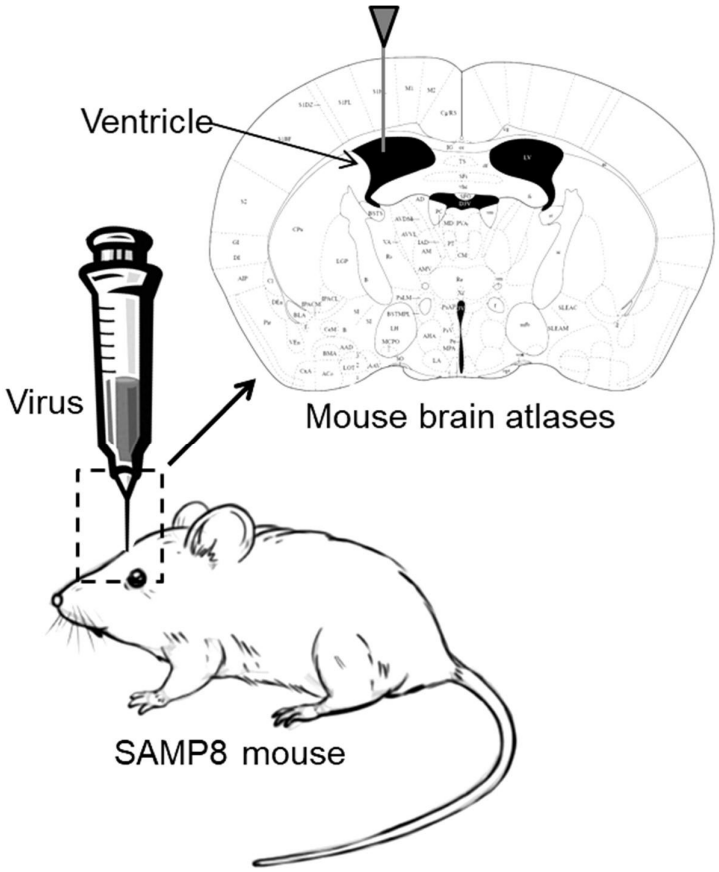

Fig.9A

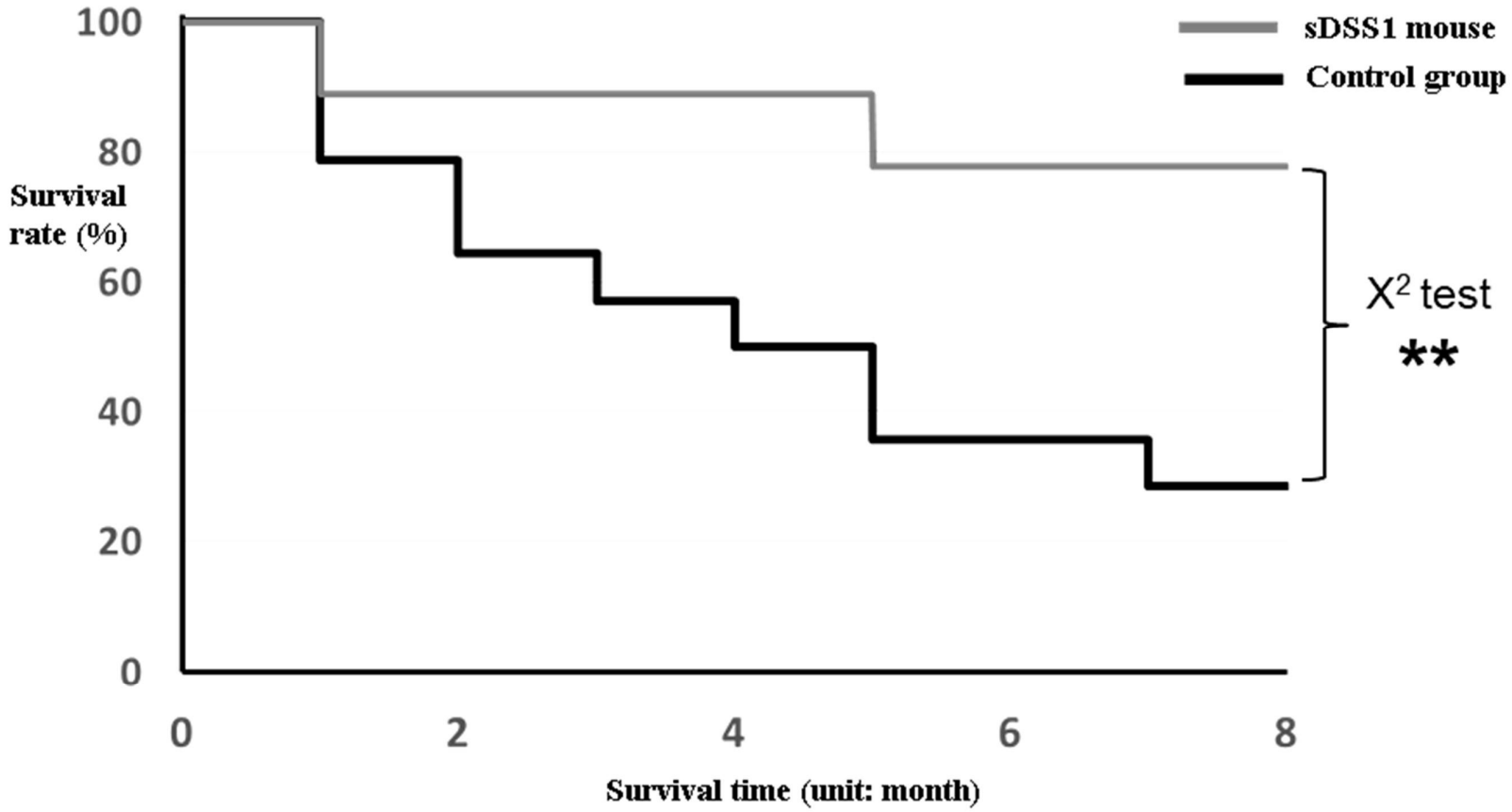
100
80
60
40
20
0
Survival rate (%)
0
2
4
6
8
Survival time (unit: month)
sDSS1 mouse
Control group
X2 test
**

Fig.9B