FIG.1

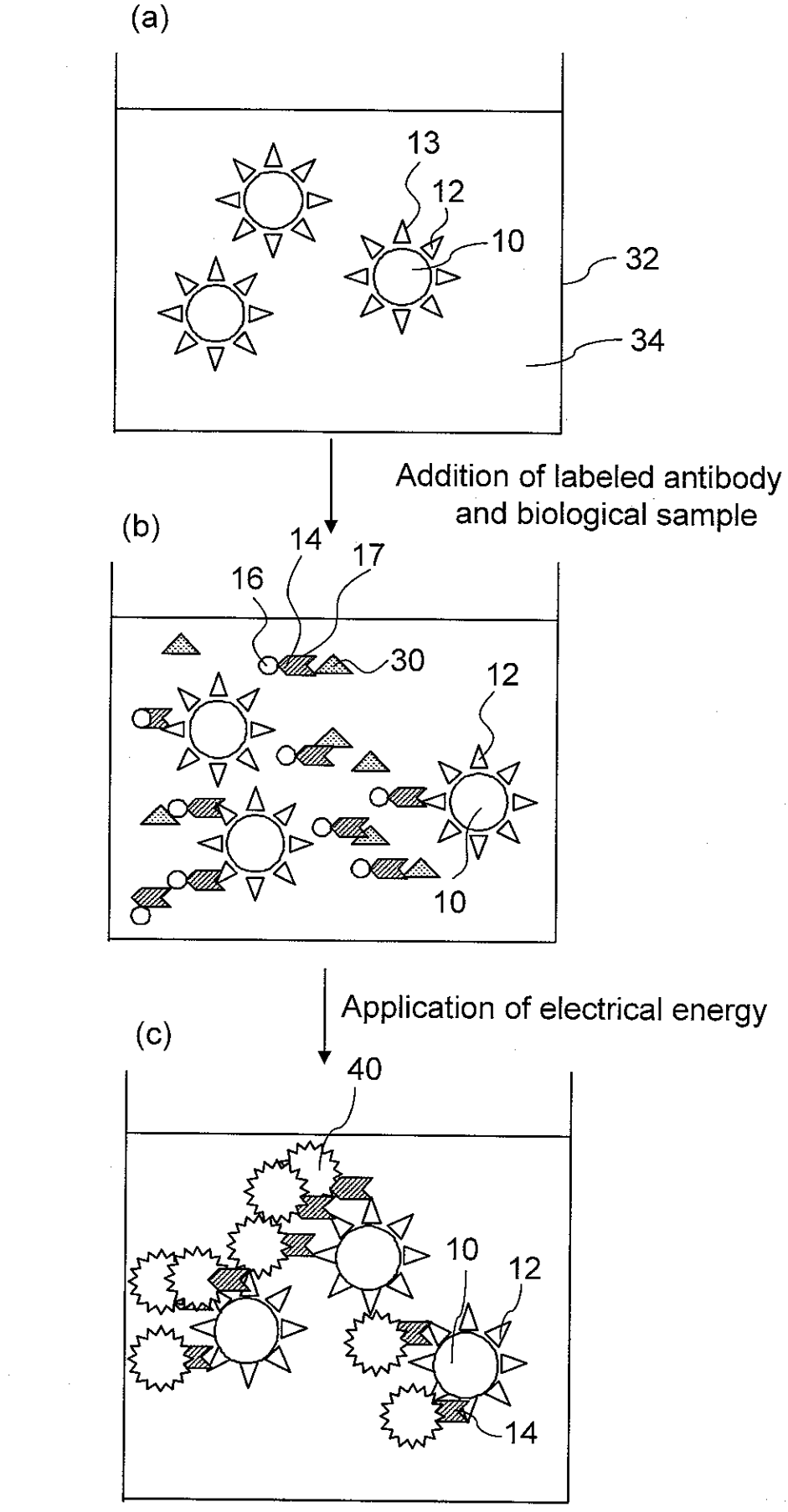

(a)
13
12
10
32
34
Addition of labeled antibody
and biological sample
(b)
14
17
16
30
12
10
Application of electrical energy
(c)
40
10
12
14

FIG.2

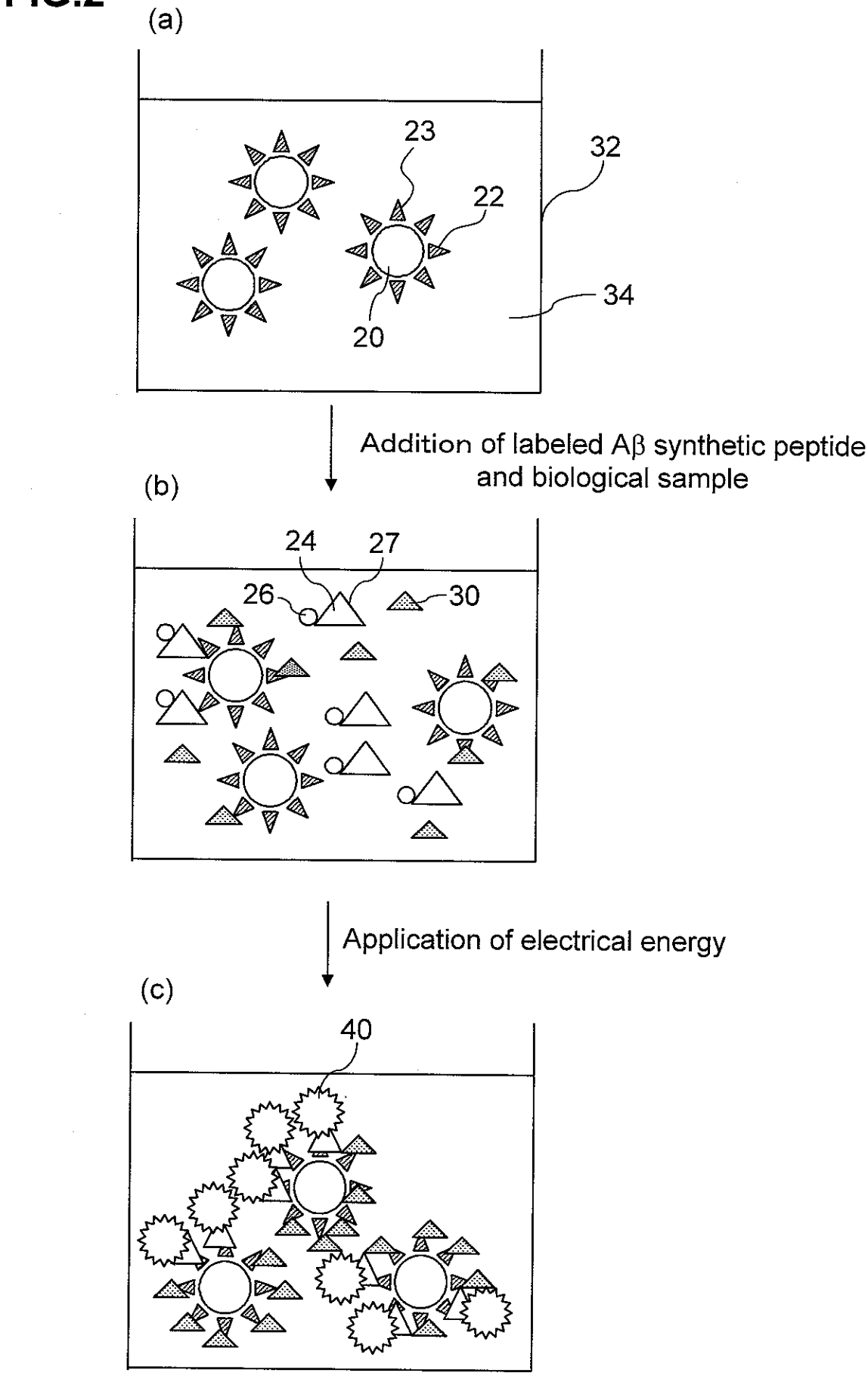

(a)
23
32
22
34
20
Addition of labeled Aβ synthetic peptide
and biological sample
(b)
24
27
26
30
Application of electrical energy
(c)
40

FIG.3

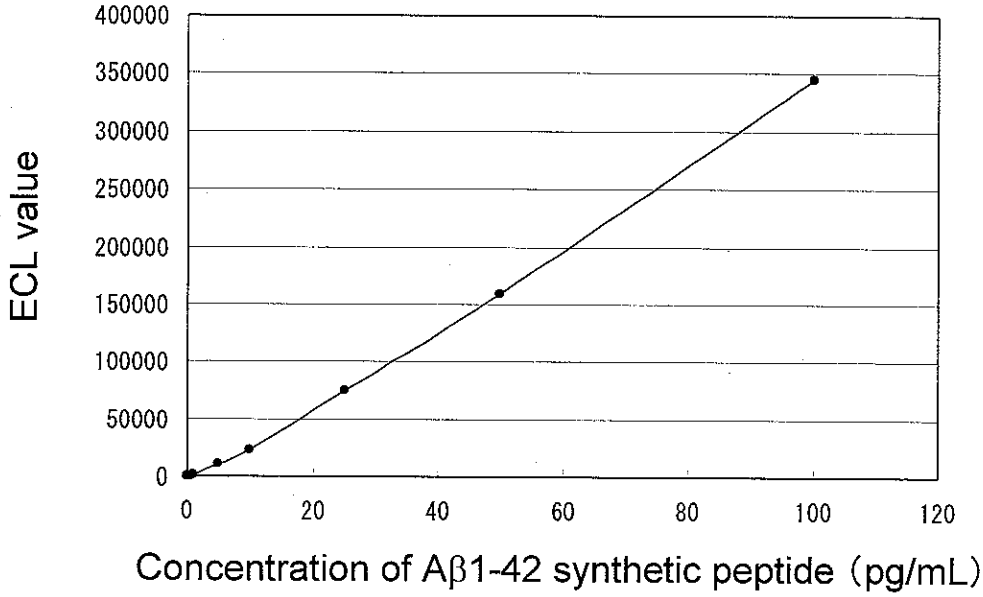

400000
350000
300000
250000
200000
150000
100000
50000
0
ECL value
0
20
40
60
80
100
120
Concentration of Aβ1-42 synthetic peptide (pg/mL)

FIG.4

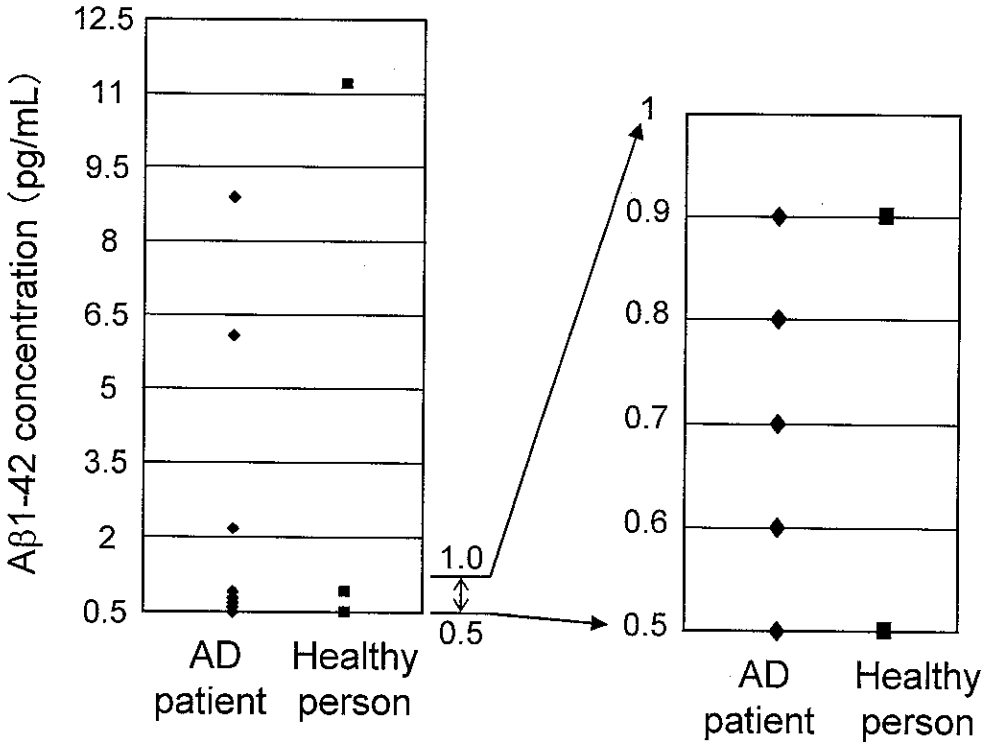

12.5
11
9.5
8
6.5
5
3.5
2
0.5
Aβ1-42 concentration (pg/mL)
AD patient
Healthy person
1.0
0.5
1
0.9
0.8
0.7
0.6
0.5
AD patient
Healthy person

FIG.5

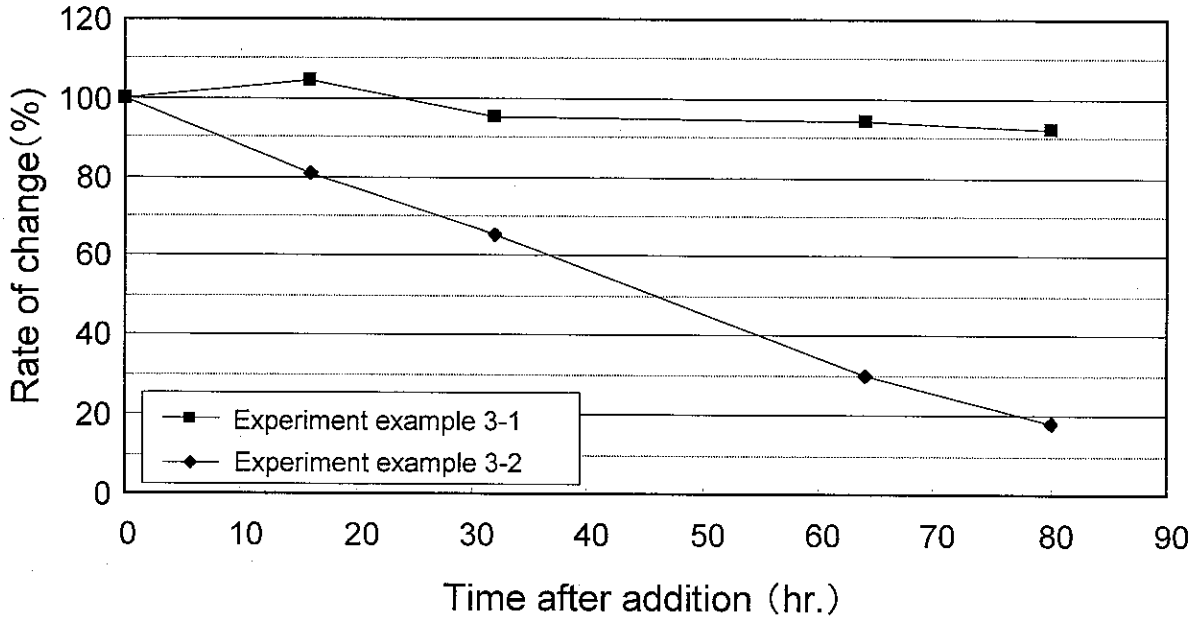

120
100
80
60
40
20
0
Rate of change (%)
Experiment example 3-1
Experiment example 3-2
0
10
20
30
40
50
60
70
80
90
Time after addition (hr.)

FIG.6

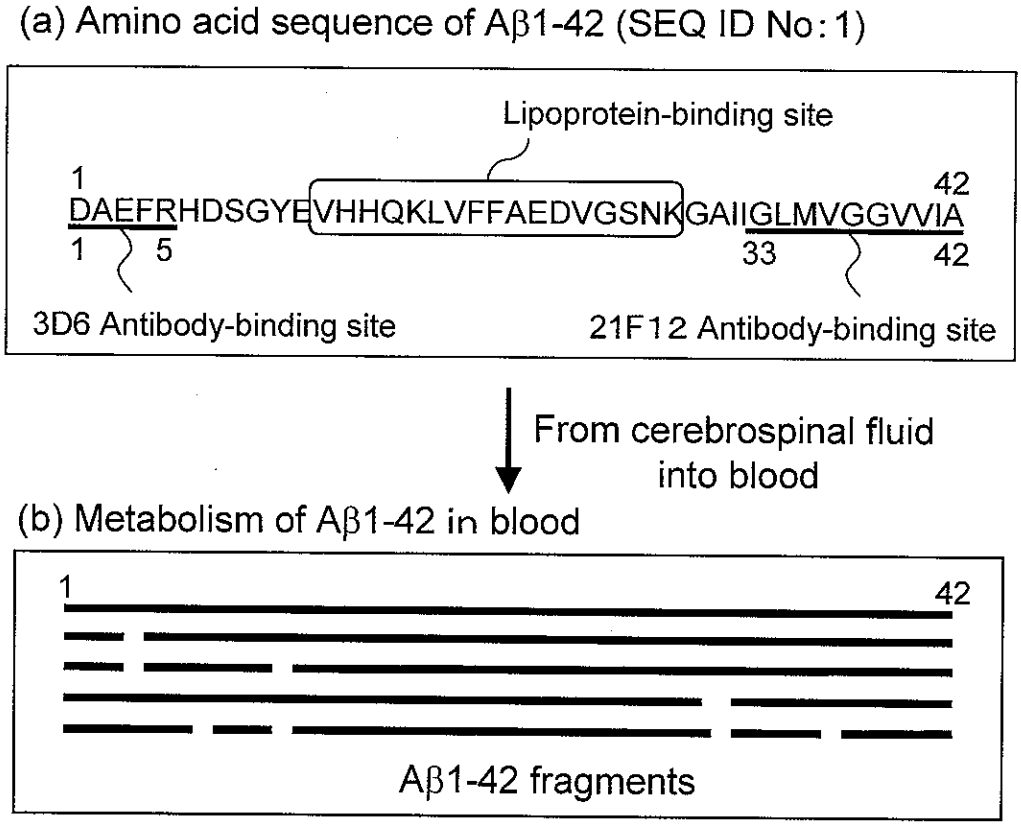

(a) Amino acid sequence of Aβ1-42 (SEQ ID No: 1)
Lipoprotein-binding site
1
42
DAEFRHDSGYEVHHQKLVFFAEDVGSNKGAIIGLMVGGVVIA
1
5
33
42
3D6 Antibody-binding site
21F12 Antibody-binding site
From cerebrospinal fluid into blood
(b) Metabolism of Aβ1-42 in blood
1
42
Aβ1-42 fragments

FIG.7

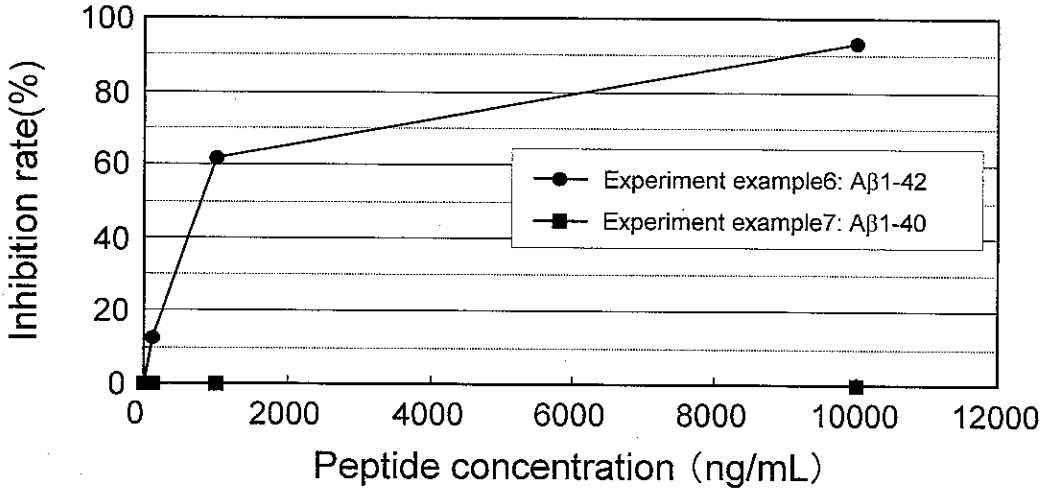

100
80
60
40
20
0
Inhibition rate(%)
0
2000
4000
6000
8000
10000
12000
Peptide concentration (ng/mL)
Experiment example6: Aβ1-42
Experiment example7: Aβ1-40

FIG.8

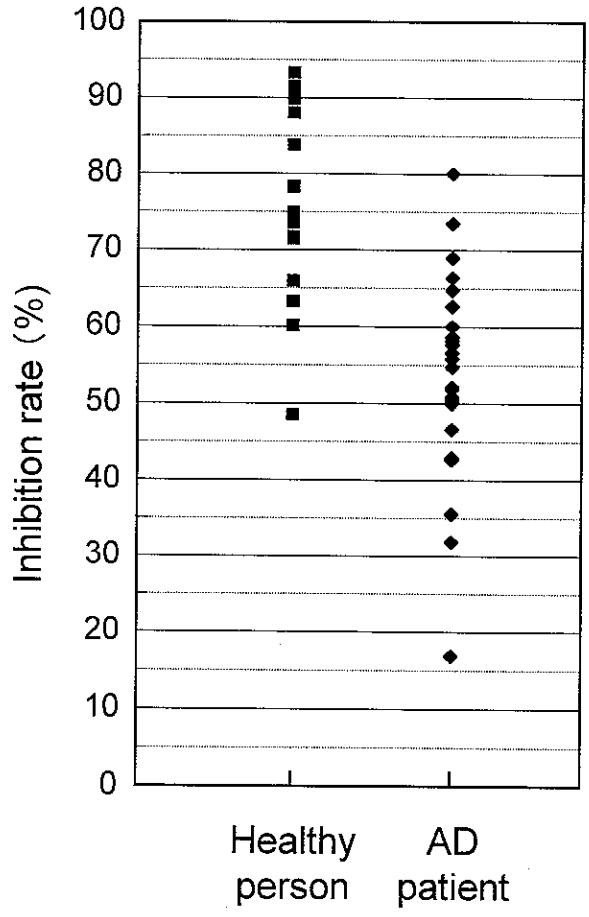

100
90
80
70
60
50
40
30
20
10
0
Inhibition rate (%)
Healthy person
AD patient

FIG.9

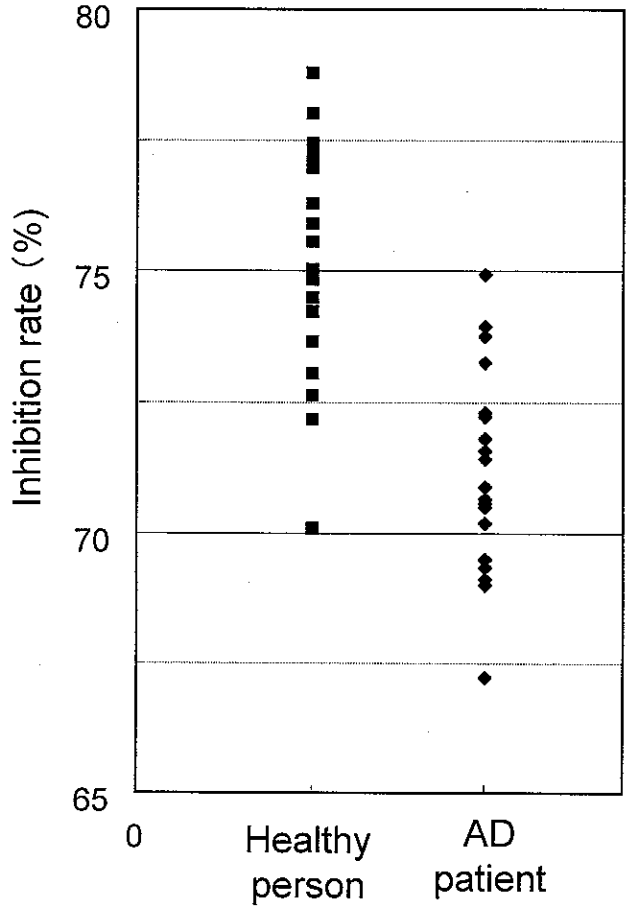

80
75
70
65
Inhibition rate (%)
0
Healthy person
AD patient

FIG.10

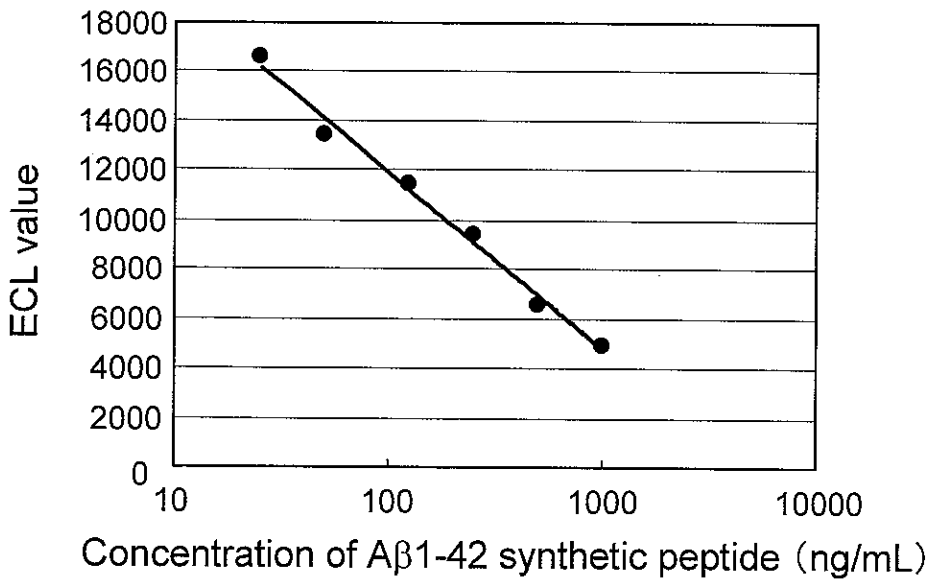

18000
16000
14000
12000
10000
8000
6000
4000
2000
0
ECL value
10
100
1000
10000
Concentration of Aβ1-42 synthetic peptide (ng/mL)

FIG.11

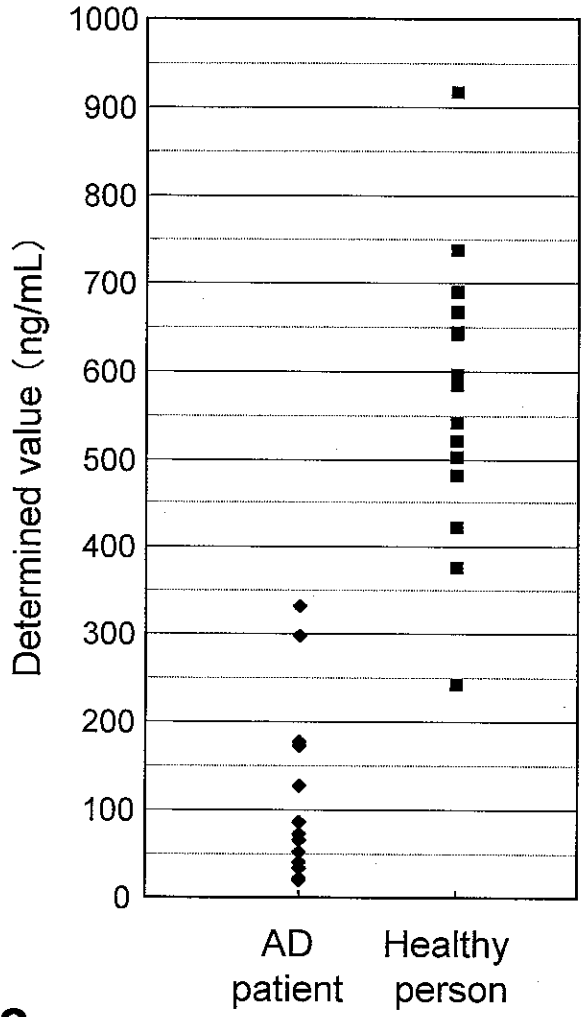

1000
900
800
700
600
500
400
300
200
100
0
Determined value (ng/mL)
AD patient
Healthy person

FIG.12

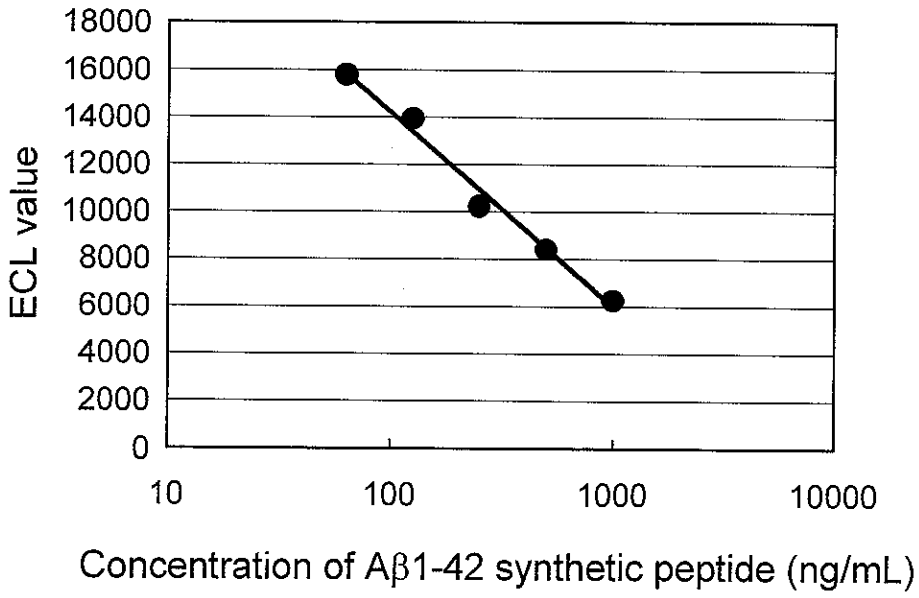
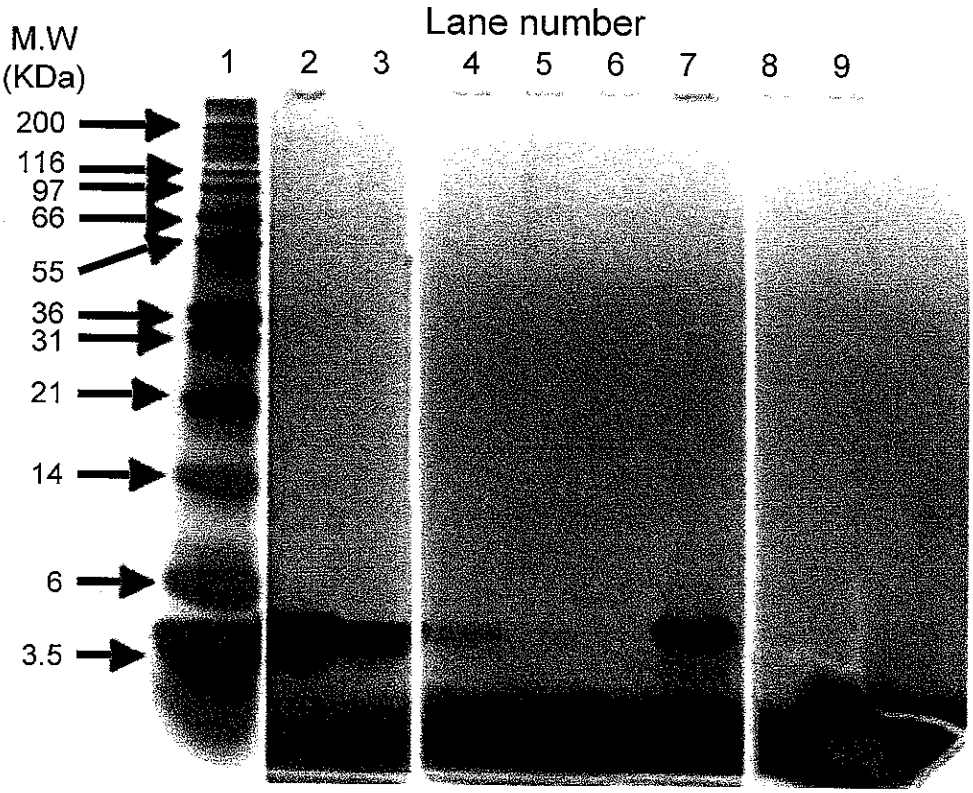

18000
16000
14000
12000
10000
8000
6000
4000
2000
0
ECL value
10
100
1000
10000
Concentration of Aβ1-42 synthetic peptide (ng/mL)

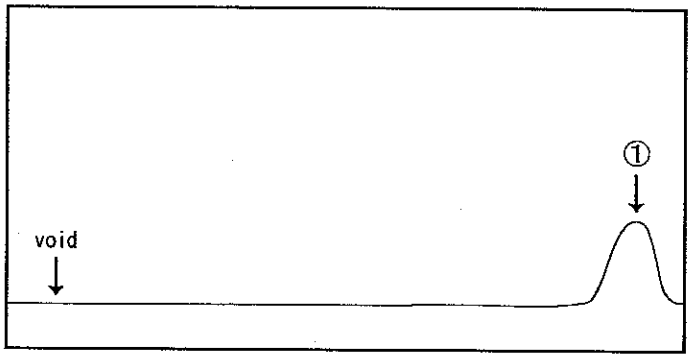
FIG.13



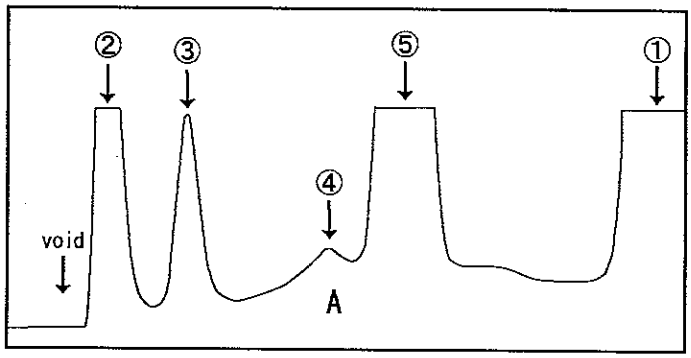
Lane	Sample	Applied Aβ amount
1	Molecular marker	-
2	Aβ1-42 synthetic peptide	500 ng
3	Aβ1-42 synthetic peptide	50 ng
4	Aβ1-42 synthetic peptide	10 ng
5	Aβ1-42 synthetic peptide	5 ng
6	Aβ1-42 synthetic peptide	100 ng
7	Experiment example 8-2	50 ng
8	Experiment example 8-3	50 ng
9	Experiment example 8-1	50 ng

FIG.14

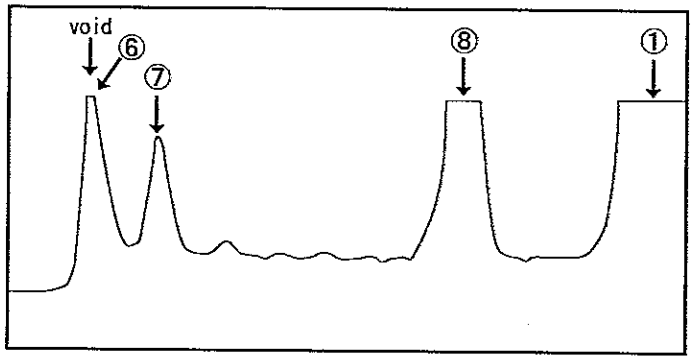
（a） DMSO①



（b） Aβ1-28②, Aβ1-11③, Aβ34-42④, Suc-D-Asp-MCA⑤



（c） Aβ1-42⑥, Aβ12-28⑦, E-64-c⑧



（d） Pepsin A⑨

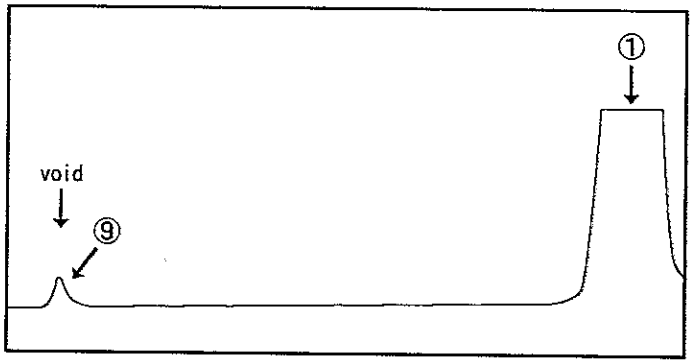


FIG.15

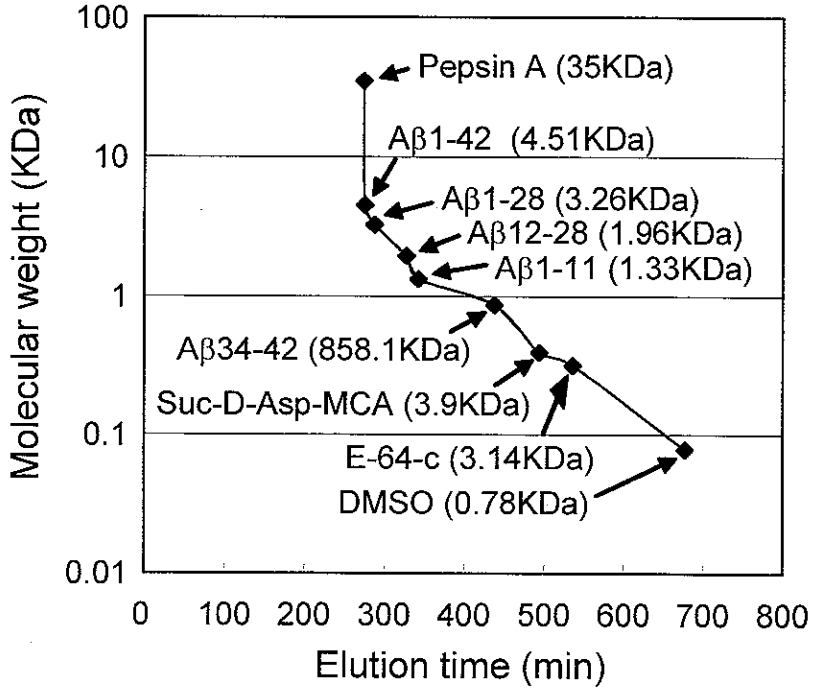

100
10
1
0.1
0.01
Molecular weight (KDa)
Pepsin A (35KDa)
Aβ1-42 (4.51KDa)
Aβ1-28 (3.26KDa)
Aβ12-28 (1.96KDa)
Aβ1-11 (1.33KDa)
Aβ34-42 (858.1KDa)
Suc-D-Asp-MCA (3.9KDa)
E-64-c (3.14KDa)
DMSO (0.78KDa)
0
100
200
300
400
500
600
700
800
Elution time (min)

FIG.16

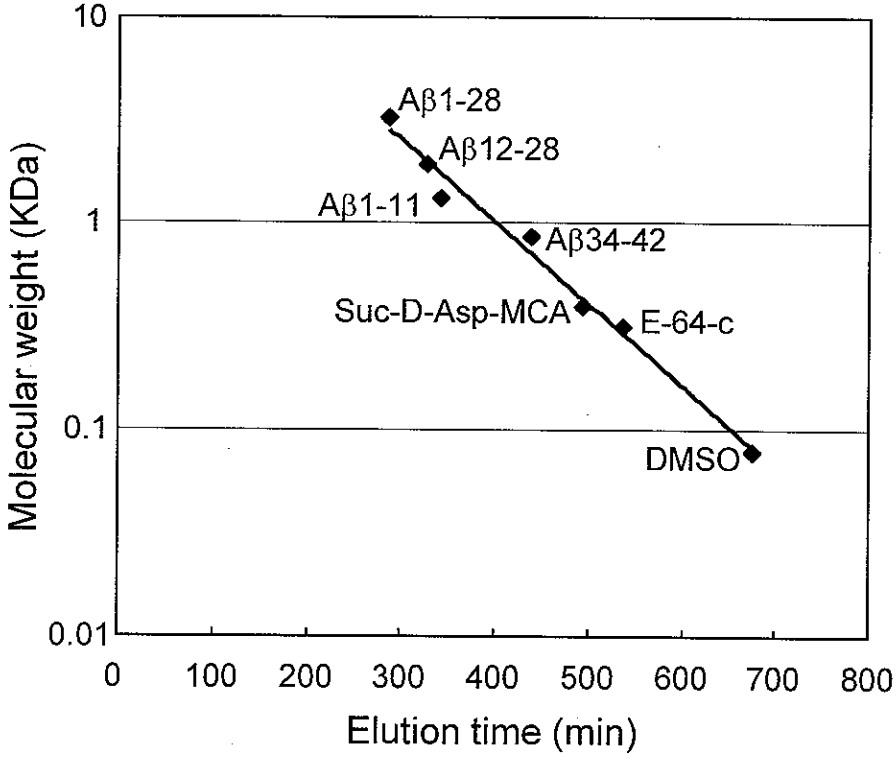

10
1
0.1
0.01
Molecular weight (KDa)
Aβ1-28
Aβ12-28
Aβ1-11
Aβ34-42
Suc-D-Asp-MCA
E-64-c
DMSO
0
100
200
300
400
500
600
700
800
Elution time (min)

FIG.17

DMSO①, Aβ1-28②, Aβ1-11③, Suc-D-Asp-MCA⑤

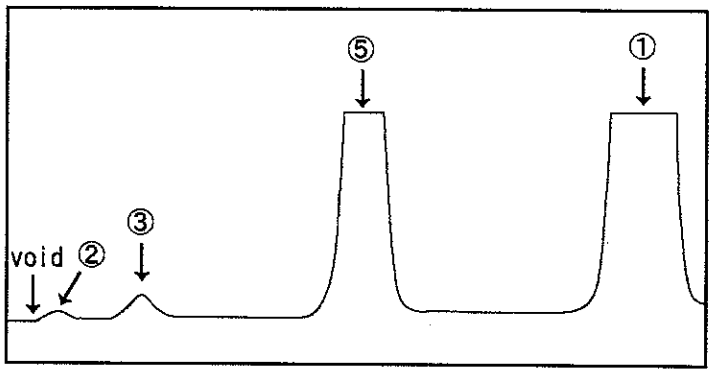


FIG.18

