

(19) (KR)  
(12) (A)

(51) 。 Int. Cl. <sup>7</sup> (11) 2002 - 0021811  
G01N 33/86 (43) 2002 03 22

(21) 10 - 2002 - 7001897  
(22) 2002 02 09  
2002 02 09  
(86) PCT/US2000/21022 (87) WO 2001/13125  
(86) 2000 08 02 (87) 2001 02 22

(54)

(DIC)

가 1999 2 4 09/244,340  
가 Fischer 5,646,046

(blood clot)

가

in vivo

(wire loop)

in vitro

( )

가

가

in vitro

(1)

, (2)

, (3)

, (4)

, (5)

(

)

가

가 , PT APTT 가

C,

S, /

가

P

T APTT

PT

가

APTT

PT

가

APTT

,

가  
2가 , , , , , ELISA  
/ 가  
, (DIC)

가 , ,  
,  
가  
가

, , , , , , ,  
A C - 300kD , A C - 300kD ,

가 , ,  
가  
,  
가  
가

가 , ,  
,  
가 , ,  
가 , ,

가



APTT (TW) S DIC " "  
( 1a b). 가, APTT 가

PT APTT 2 가  
 0.015M - 9 (part) 1 ,  
 MDA(Multichannel  
 I Discrete Analyzer) 180 (Organon Teknika Corporation, Durham, NC, USA) . MDA Simpla  
 stin LS PT( 11.2 - 15 ) MDA Platelin LS 0.025M (Organon Teknika Corporaton,  
 USA) APTT( 23 - 35 ) 가 APTT TW  
 580nm , 25  
 100% 10000 10000  
 1a , 1b  
 10000 1b  
 가 25

APTT

DIC DIC . (a) TW  
 (b) DIC , (c) PT APTT  
 , DIC . (TT)( 10.5 - 15.5 ), (Fgn)(  
 1.5 - 3.8g/l) Nyocard D - (Nycomed Pharma AS, Oslo, Norway) D - 가(  
 < 0.5) . EDTA (Plt)( 150 - 400 10<sup>9</sup>/l)  
 가, DIC TW

2 ( PT, APTT, Fgn, TT Plt) D -  
 DIC DIC .  
 (> 0.5mg/l)  
 가 DIC . .  
 , DIC APTT - TW , , - - (two - by  
 - two) . 95% (CI)

1,470 . 747 . 54 . 174  
 (11.9%) 가 . 54 . 22 . 가 . 3  
 가 . 41 DIC가 , 30 ,  
 . 1 .

DIC 41 TW 가 . C) 가 21.0 PT, 44.0 APTT 가 D - 1.5mg/l  
 (PET) . PET



(a) TW DIC , (b) TW DIC  
 가 DIC ,  
 TW가 DIC ,  
 DIC 90% ( 2 ) TW ( 4 ) D  
 TW DIC ,  
 PET DIC TW  
 PET 6 가 DIC 가 DIC PET DIC TW  
 가

1a 1b APTT , 1a , 1b  
 2 ; 54 25  
 ; DIC가 ( ) ( ) ;  
 4 DIC가 ( ) ( ) ;  
 5 25 (TR25), APTT , \_1( ) DIC  
 ROC ;  
 6 7 TR25 \_1 DIC, / - DIC ;  
 8 10 \_1 TR25 ;  
 9 11 8 10 ;  
 12 APTT ;

13 14 PT ; ;  
15 , (X) APTT ( ) , (Y)  
16 CRP ELISA ; ;  
17 ; ;  
18 가 ; ;  
19 ; ;  
20 ; ;  
21a 21 SDS (page) SDS ;  
22 DIC ; ;  
23 (가 ) Q - 2가 가 ;  
24 ELISA CRP ; ;  
25 가 ; ;  
26 ; ;  
27 (calibration) ; ;  
28 18 56 ITU CRP ; ;  
29 CRP 18 (10000 - TR18) 가 .  
  
25 DIC ,  
가 . , 25  
, 25 , 25 ( )  
가 / ,  
,  
( 가 ) 가

DIC , 가 . , 9 DIC ,

|       |                  |           |      |         |     |
|-------|------------------|-----------|------|---------|-----|
|       | 가                | . 91 APTT | 1    | 51      | DIC |
|       | . 110 APTT       | 2         |      |         |     |
| (1)25 | . 37 APTT        |           | 22   | , - DIC | . 5 |
|       | (TR25), (2) APTT | , (3)     | 1(   | )       |     |
|       | APTT             |           |      | DIC     | ROC |
|       | 1 가              | , TR25    | . 18 | 가       | 가   |
| APTT  | 25               |           |      | 가       | " " |
| 4     |                  |           |      |         |     |

[ 4]

| 파라미터  | 한계        |
|-------|-----------|
| TR25  | < 9700    |
| 응고시간  | > 35      |
| 슬로프 1 | < -0.0003 |

|   |              |     |   |      |
|---|--------------|-----|---|------|
| 1 | 가            | . 6 | 7 | TR25 |
|   | DIC, / - DIC | . 5 | 6 | 6 7  |

[ 5]

| Bins    | DIC | 정상 | 비정상/비-DIC |
|---------|-----|----|-----------|
| -0.006  | 3   | 0  | 0         |
| -0.005  | 2   | 0  | 0         |
| -0.004  | 1   | 0  | 0         |
| -0.003  | 10  | 0  | 0         |
| -0.002  | 24  | 0  | 0         |
| -0.001  | 33  | 0  | 0         |
| -0.0005 | 12  | 0  | 0         |
| -0.0002 | 5   | 5  | 2         |
| -0.0001 | 1   | 37 | 13        |
| More    | 0   | 68 | 22        |

[ 6]

| <i>Bin</i> | DIC | 정상 | 비정상/-DIC |
|------------|-----|----|----------|
| 7000       | 34  | 1  | 0        |
| 8000       | 18  | 2  | 0        |
| 9000       | 26  | 6  | 1        |
| 9500       | 8   | 3  | 0        |
| 9600       | 3   | 2  | 1        |
| 9700       | 1   | 0  | 0        |
| 9800       | 1   | 3  | 0        |
| 9900       | 0   | 21 | 4        |
| 10000      | 0   | 62 | 30       |
| More       | 0   | 10 | 1        |

8 10 1 TR 25 ; 9 11 8 10 .

flag ). DIC , - 0.0003 가 / . - 0.0005 가 .  
)

APTT . , DIC  
APTT APTT (ellagaic acid)  
PT DIC

APTT , PT PT ( ), Recombiplast <sup>TM</sup> (Ortho), Thromborel <sup>TM</sup> (Dade - Behring) Innovin <sup>TM</sup> (Dade - Behring) . Reco  
 mbiplast Thromborel . Innovin . Innovin , Recombiplast Thromborel  
 PT 10 , Recombiplast Thromborel  
 Innovin . Thromborel . Thromborel  
 . Thromborel . Thromborel

Platelin™ APTT Recombiplast™ PT  
 . 4 가 . 가  
 (APTT TL 18 PT TL10 ), APTT PT  
 . . 13(Recombiplast) 14(Thromborel S) PT  
 . 12(Platelin) APTT . ,  
 PT . ,

가 . DIC

15 : (X) APTT ( )  
, (Y) ( ) 가  
) . (Y) / -  
가 , 가 ( )  
. ) . 16 CRP( CRP) ELISA

(Hiprep Sephadryl S-300 - 10 1500kDa ) . 320ml  
 $(d=26\text{nm}, l=600\text{mm})$ , 1.35ml/ . 17 . .

PPACK(10 μM), HBS/1mM/10 μM, 5ml (b), 20, 35 - 70% (Q-)

21a 21b SDS PAGE  
 . ( ): 5 - 15% /Neville .( 10 $\mu$ g ). 1  
 94, 67, 45, 30, 20 14kDa 2 35% (NH<sub>4</sub>)<sub>2</sub>SO<sub>4</sub>, 3 7  
 0% (NH<sub>4</sub>)<sub>2</sub>SO<sub>4</sub> 4 Q - 21a 5, 6, 7 8  
 ( 20 ) 1, 2a, 2b, 3 9 1 10 . NH<sub>2</sub> -  
 8 9 3, 22kD C - (CRP) 9 10kD  
 A(SAA) 5 1 23 300kD  
 , 가 가 (CRP ) .

CRP DIC . 1( 22 ): ( SDS - PAGE/CRP  
 $0.2\mu\ell$  ). ( ): NHP; Pt 5; 3; 1; 2; 4; 8. 2 :  
( ): NHP; Pt 9; 10; 11; 7; 6; 12. 3 : (DIC CRP) -  
( ; ng CRP ) : 3.91; 7.81; 15.625; 31.25; 62.5; 125; 250. PBS, pH 7.4  
2% (w/v) BSA - CRP - IgG (Sigma, Cat# C3527, PBS/0.01%

20 1:5000 ) HRP (PBS/0.01% 20 1  
:25000 ) .

23 Q - , 1 3 2가 가 CRP, 300kD  
 . ( 3 + ).

24 ELISA CRP,  $\mu\text{g/ml}$  A405nm 24 가 PPACK 가  
 .  
 CRP 가 , .

T 26 ( ) , APT  
가 ( ) , \_1  
/ 27 ( ) , \_1 가 가

28 , 56 ITU CRP 18  
18 . 29 CRP 18 가  
(10000 - TR18). 가 가  
CRP . 가 CRP  
CRP .

, CRP / . , 300kD CRP 가

CRP

## ELISA (



8.

1 ,

9.

8 , 가

10.

1 , , 가

11.

1 , 가 20KD

12.

11 , , EDTA 5 가

13.

1 , 가

14.

1 , \_0

15.

14 , \_0

16.

1 ,

17.

10 ,

18.

a) ;

b) ;

c)  
가 ;

d) 가 ;

e) 가 가

19.

18 , 가

20.

18 ,

21.

18 ,

22.

21 ,

23.

22 , , , , ,

24.

18 , 가

25.

24 , , , PPACK, I2581

26.

18 ,

27.

18

, , .

28.

18

, DIC .

29.

a)

;

b)

A C -  
가

A C -

30.

29

, .

31.

30

, .

32.

30

, , , , , 2가 ,  
, PPACK, I2581

33.

a)

가 ;

b)

가 ;

c)

;

d)

2 , 가 ;

e)

;

f)

가

34.

33

, PT APTT .

35.

34

,

가

36.

35

,

가

, , , ,

37.

35

,

38.

37

,

, PPACK, I2581

39.

33

,

1

2

40.

a)

가 ;

b)

;

c)

;

d)

가

a)      c)

,

가

41.

40

,

42.

40

,

2가

43.

42

,

, , , ,

44.

42

,

45.

44 , , , PPACK, I2581

46.

40 , 가

47.

40 , , ,

48.

a) 가 ;

b) ;

c) ;

d) 가 가 ;

e) ;

49.

48 , /

50.

48 ,

51.

50 , , , , , / - 1

52.

48 , 가 DIC DIC

53.

48 , a) d) , 가

54.

53

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55.

54

,

56.

55

,

57.

48

,

2가

58.

57

,

, , ,

/

59.

57

,

60.

59

,

, I2581, PPACK,

/

61.

a)

가

;

b)

;

c)

가

;

d) a)      c)

/

;

e) c)

,

/

;

f)      e)

62.

61

, a)      c)

63.

61 , DIC DIC

64.

61 ,

65.

64 ,

66.

65 , 가 , , , ,

67.

61 , /

68.

61 , /

69.

68 ,

70.

a) C - 21 5 300kD ;

b) 300kD ; C -

c) C - 300kD / ;

d) C - 300kD /

71.

70 , C - 300kD 2가  
가

72.

71 , CRP 300kD A

73.

70 , DIC DIC

74.

71 ,

75.

71 , C - , , C -

76.

a)

가 ;

b)

;

c)

/ ;

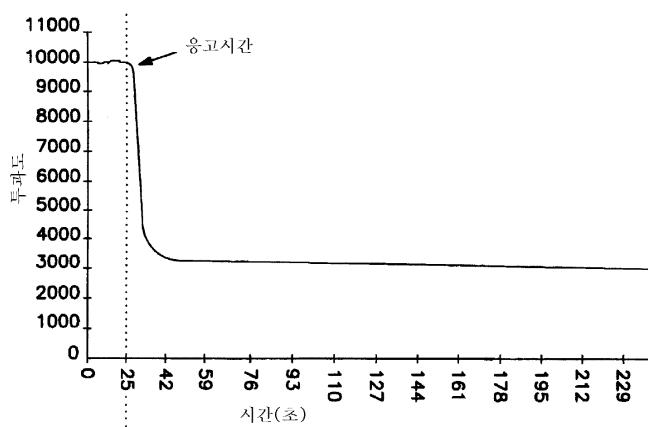
;

d)

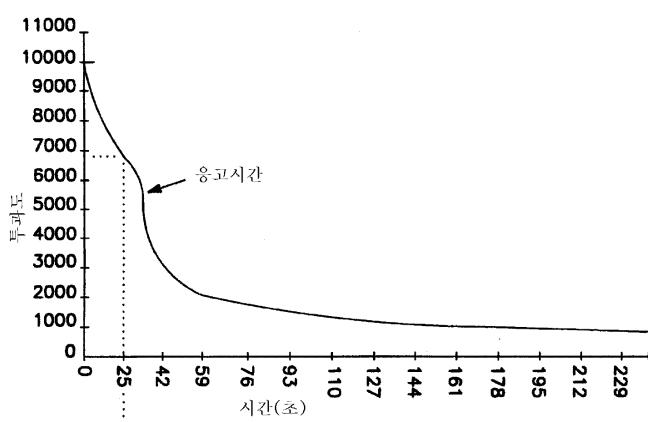
e)

가 a) c) , , /

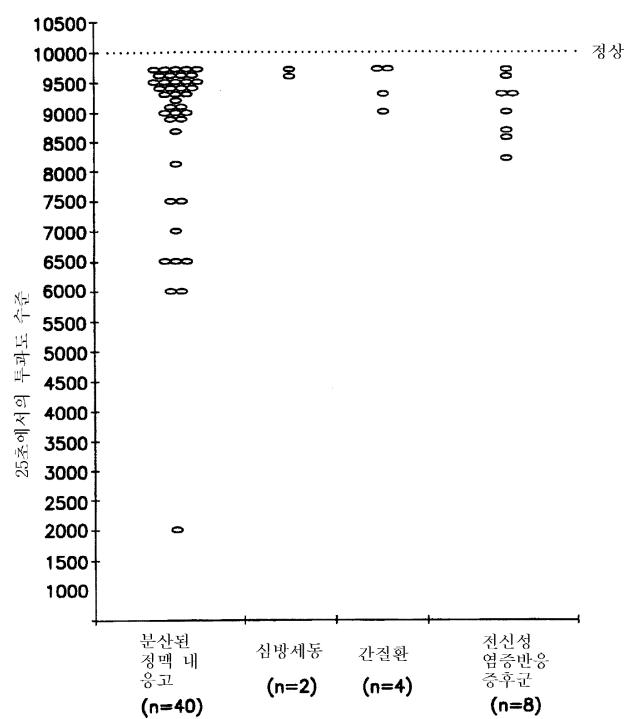
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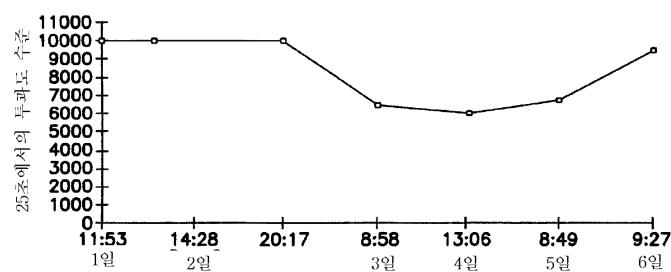
1b



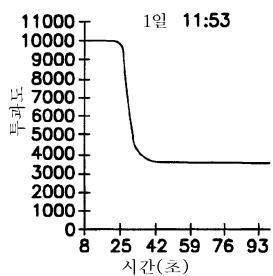
2



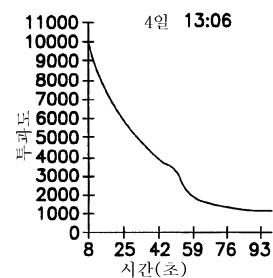
3a



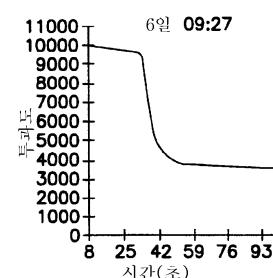
3b



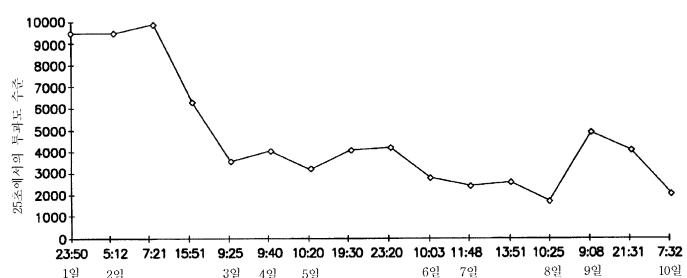
3c



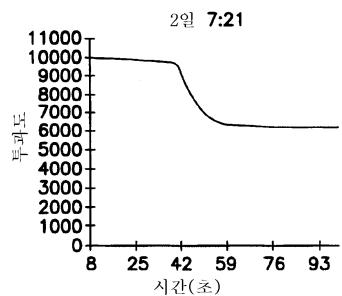
3d



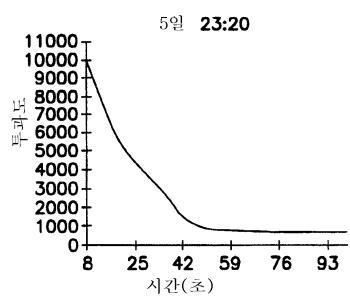
4a



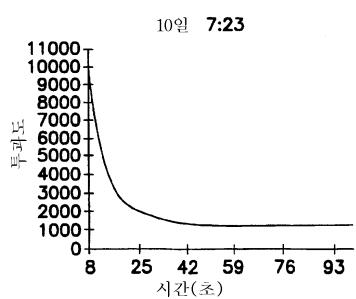
4b



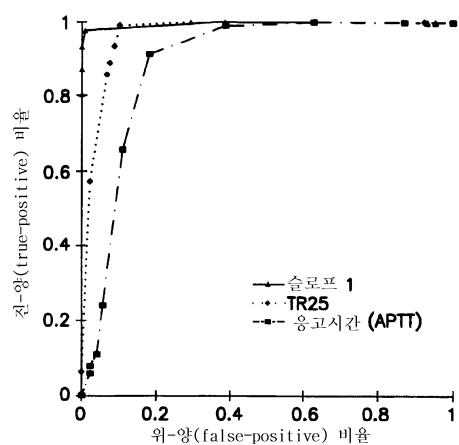
4c



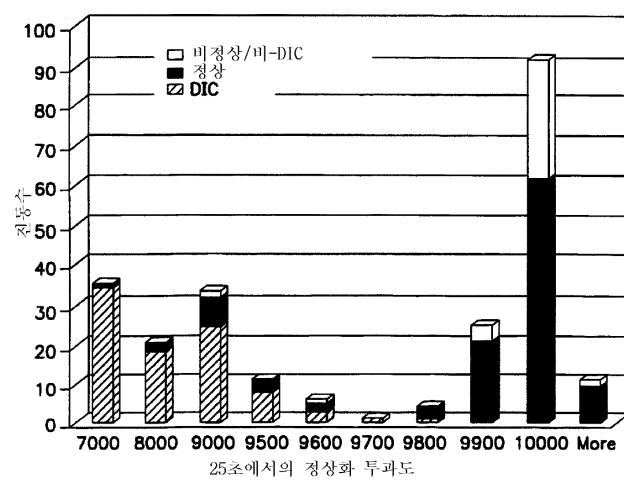
4d



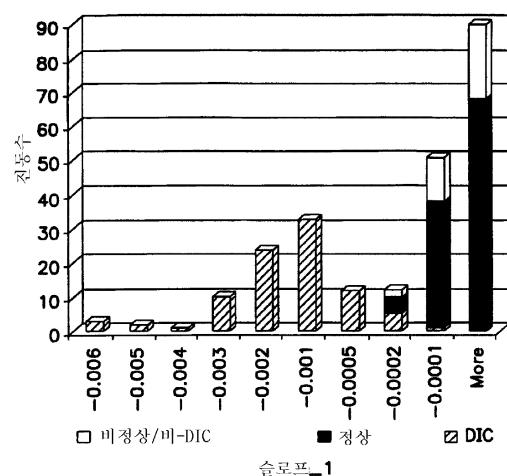
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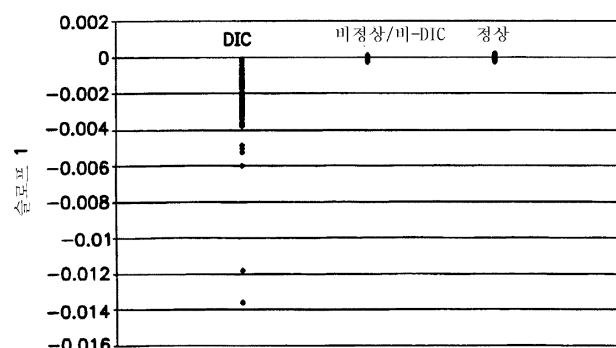
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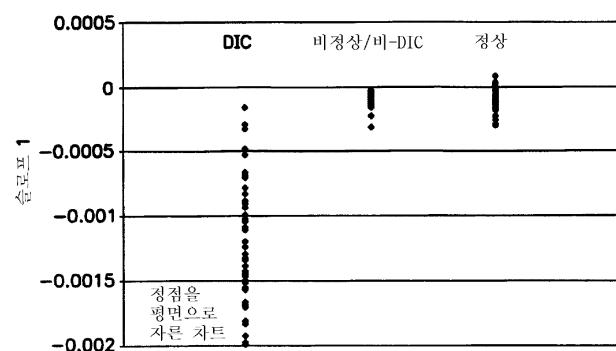
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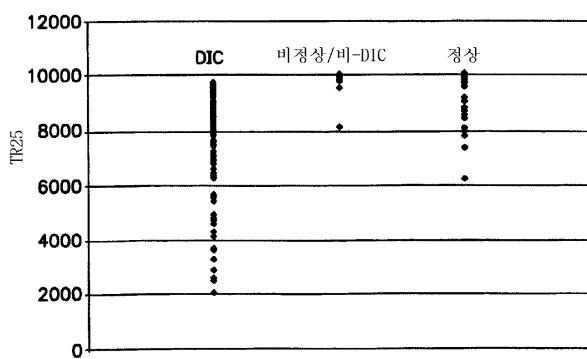
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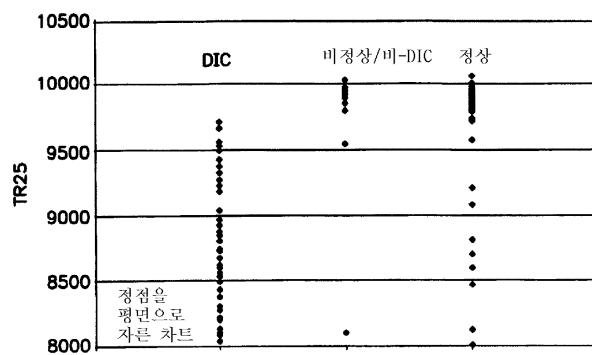
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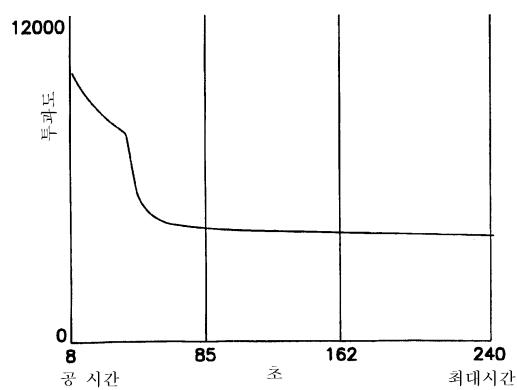
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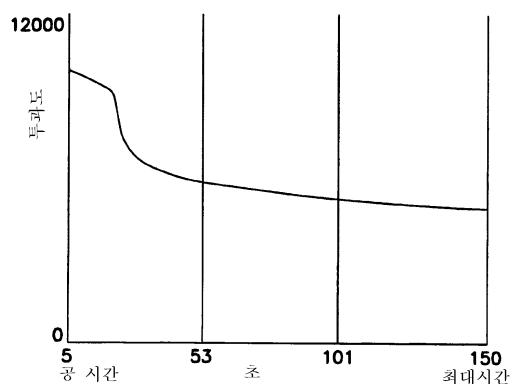
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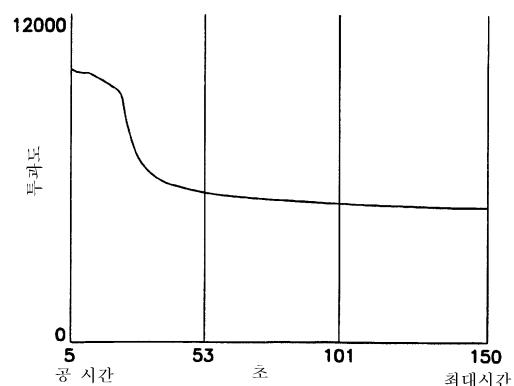
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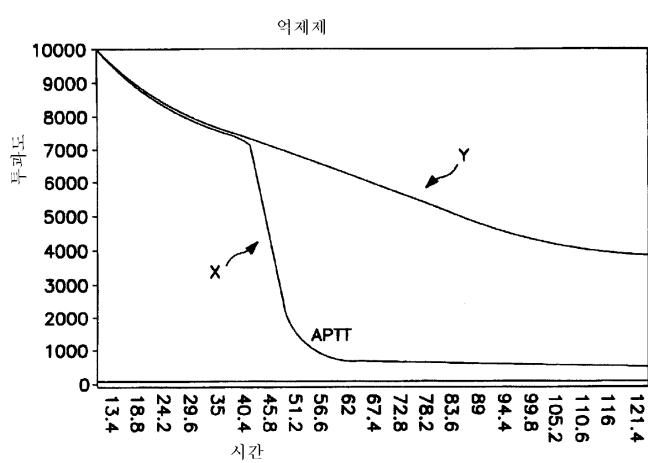
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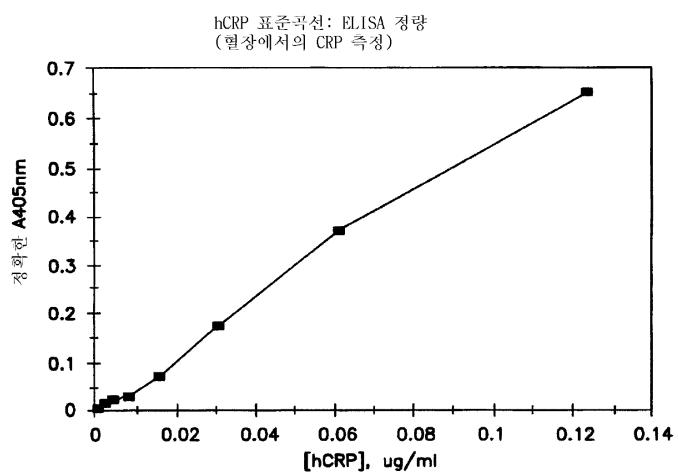
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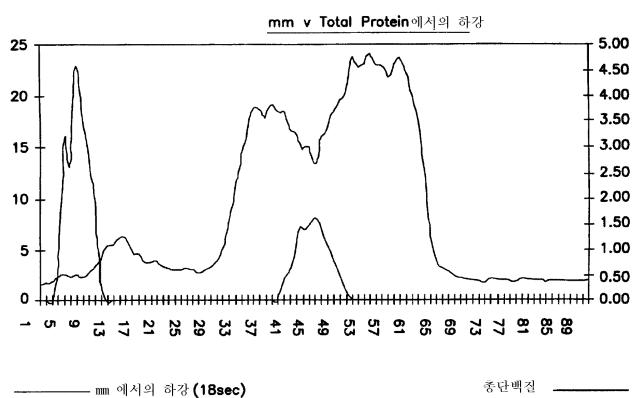
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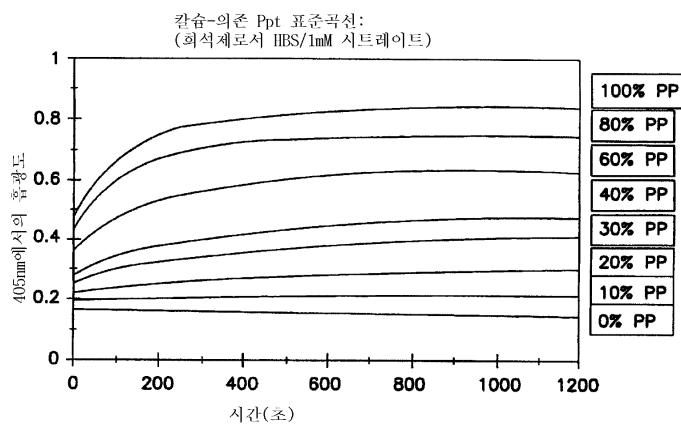
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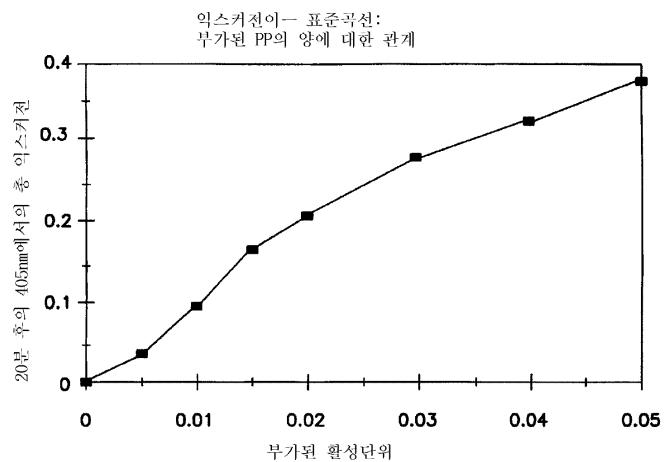
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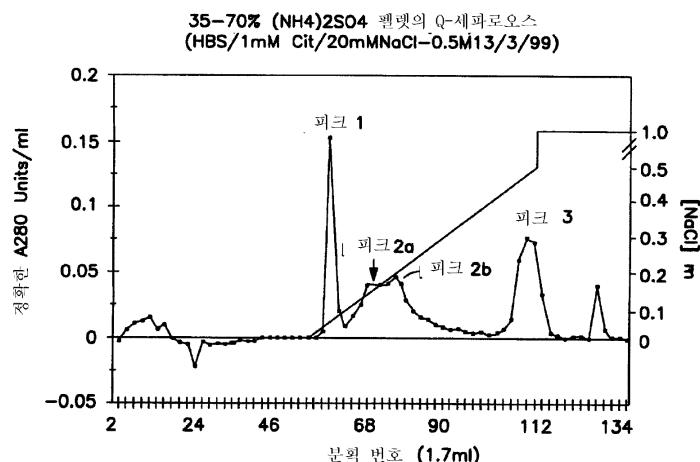
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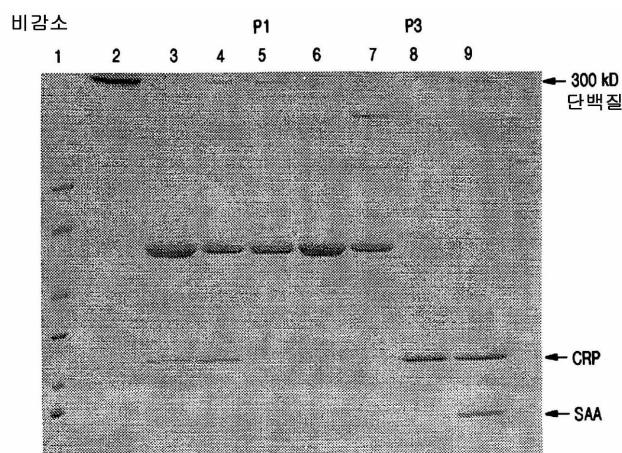
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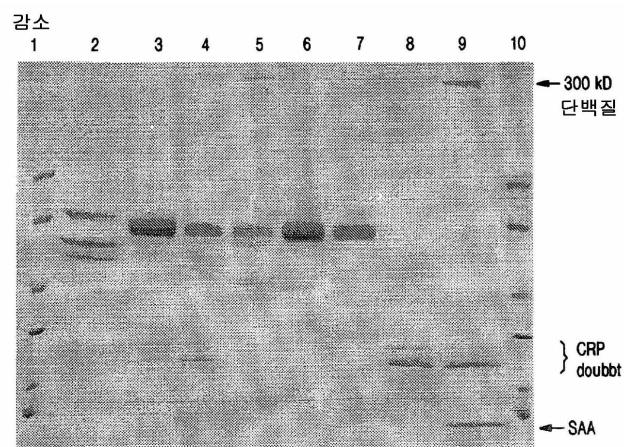
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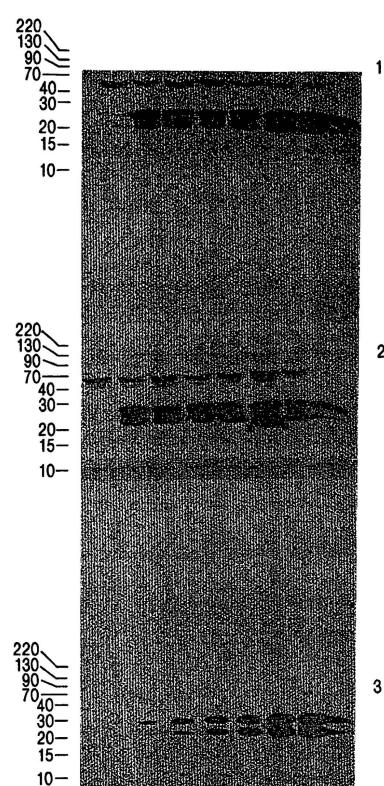
21a



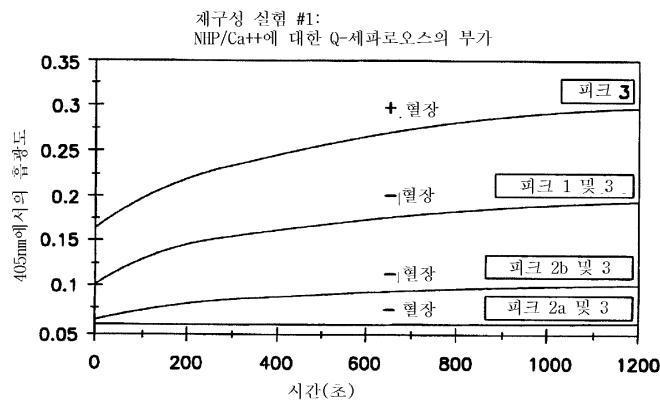
21b



22



23

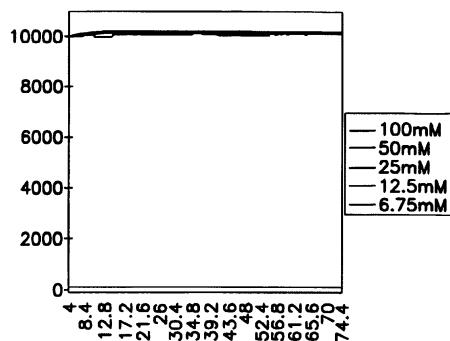


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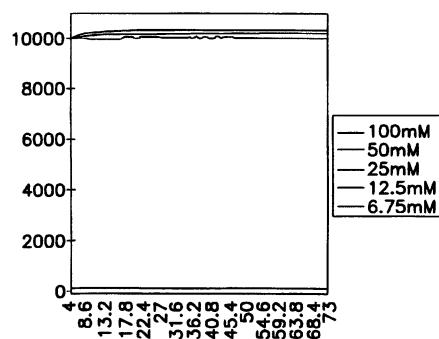
혈장 CRP 수준 및 칼슘-유도 탁도의 변화

| 혈장 표본 | [CRP], ug/ml | 델타 A405nm |
|-------|--------------|-----------|
|       | 0.73         | 0         |
| Pt#1  | 248          | 0.329     |
| Pt#2  | 277          | 0.235     |
| Pt#3  | 319          | 0.345     |
| Pt#4  | 443          | 0.170     |
| Pt#5  | 478          | 0.640     |
| Pt#6  | 492          | 0.230     |
| Pt#7  | 528          | 0.140     |
| Pt#8  | 576          | 0.640     |
| Pt#9  | 600          | 0.390     |
| Pt#10 | 639          | 0.160     |

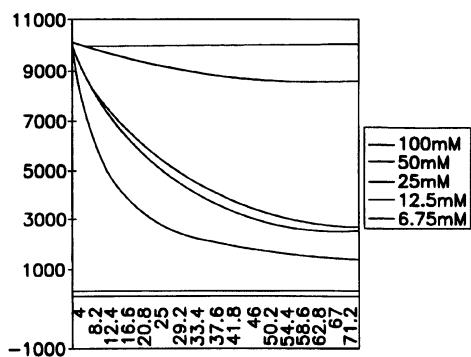
25a



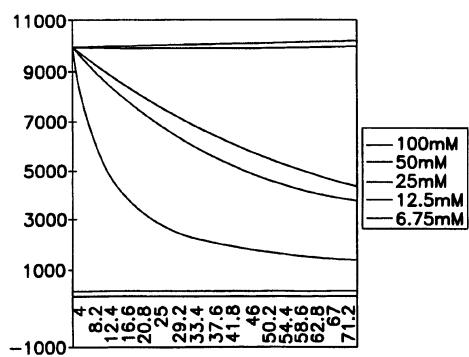
25b



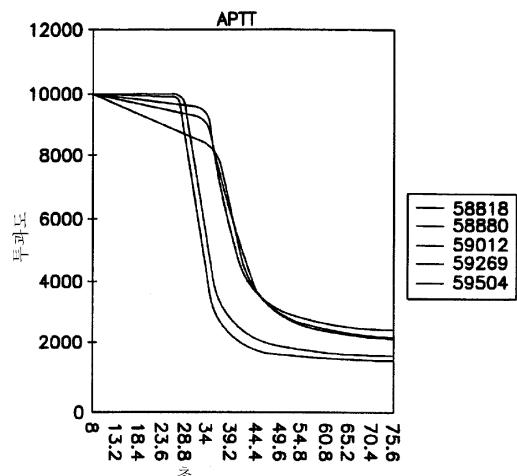
25c



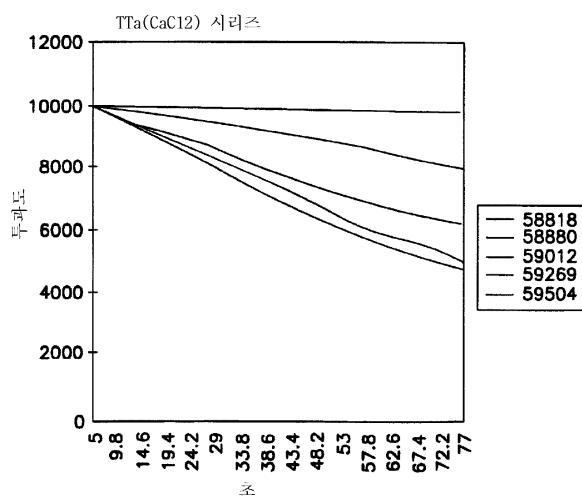
25d



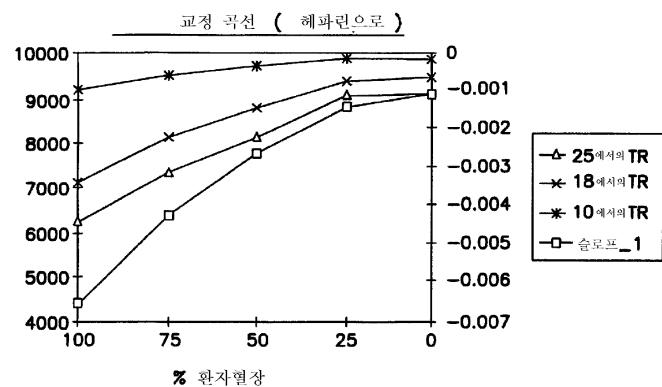
26a



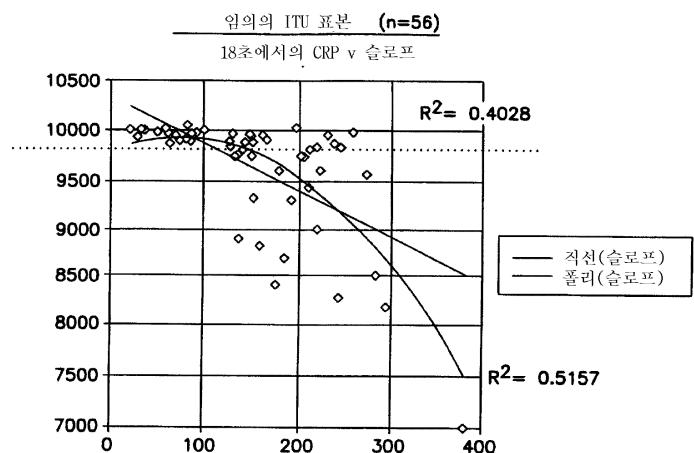
26b



27



28



29

