

(19)
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(KR)
(B1)

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C07K 14/62

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(11)
(24)

2003 07 07
10-0382326
2003 04 17

(21) 10-1995-0015782
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(43)

1996-0000924
1996 01 25

(30) 08/260634 1994 06 16 (US)

(73) 46285

(72) 46214 7572

46256 9909

46260 9377

46220 6156

46220 5354

(74)

: -

(54)

: , , m- , , m-

3

- 1 Lys B28 Pro B29 -
- 2 Lys B28 Pro B29 -
- 3 Lys B28 Pro B29 -

1920 가 가 가 가

(Brange) [Diabetes Care 13: 923-954(1990)]

(Chance) 383 472 2

14 826 가 1%가 (, 1990), Zn(II)-T₆

(Derewenda) [Nature, 338: 594-596 (1989)] Zn-

(B. H. Frank) (Self-Association and Conformational Studies on Human Proinsulin and Insulin Analogs)' , (1989 8 29

9 1) Zn- 가

(Brems) [Protein Engineering, 5: 6, 527-533(1992)]

Lys B28 Pro B29 -hl Asp B28 Pro B29 -hl, Ala B28 Pro B29 -hl, Lys B28 Pro B29 -hl Zn-
 Pro B29 , Lys B28 , Asp B28 , Ala B28

Zn- Zn- ; Zn-

Zn(II)-T₆

Zn(II)-R₆

[Current Opinion in Structural Biology 1: 934-940(1991)]

가 [Diabetes Care 13: 923-954(1990) /

, Zn(II)-R₆ 가 , Zn(II)-T₆

2 가

가

6 , 2

m- , m-

3

1 Lys B28 Pro B29 -hl

2 Lys B28 Pro B29 -

Lys B28 Pro B29 -

3 Lys B28 Pro B29 -

488nm, 90 °

(□) 1.25mg/Mℓ 가

Lys B28 Pro B29 -hl(*) 1.09mg/Mℓ, 7mM



Lys B28 Pro B29 -hl() ; Zn 0.5 / , m

16mg/Mℓ

B28 Pro가 Asp, Lys, Leu, Val, Ala , B29 Lys Lys Pro

des(B28-B30)- ; des(B27)-

383 472 ,

214 826

가

, B10 ; B30

; B1

; B9

; B1

B2

; B30

37 C.F.R. § 1.822(b)(2)

Lys B28 Pro B29 -

(B28 Lys ; B29 Pro).

m-

m-

m-

TRIS,

가 , , 1 2 m- , , m- , 3 pH가 7.5 가 .

HCl pH 3.0 3.5 , . , 가 , 가

pH 7.4 7.5 . , , 가 , 가

0.5mg/Mℓ 20mg/Mℓ ; , 1.2mg/Mℓ 17.5mg/Mℓ ; 가 , 3.5mg/Mℓ 10μg/Mℓ 50μg/Mℓ . , , 7 14μg/Mℓ 35μg/Mℓ , 2 , , 가 , 6 , , 23mM 35mM , 가 29mM . , m- , 16mg/Mℓ . pH , 가 , , 가

s B²⁸ Pro B²⁹ -hl ; 1 , Lys B²⁸ Pro B²⁹ -hl() ; Ly

B²⁸ Pro B²⁹ -hl Lys B²⁸ Pro B²⁹ -hl Lys B²⁸ Pro B²⁹ -hl 1 : , Lys B²⁸ Pro B²⁹ -hl 가 ; , Lys B²⁸ Pro B²⁹ -hl 가 . 6 , Lys B²⁸ Pro B²⁹ -hl 1.63% 가 가 . 0.61% , Lys B²⁸ Pro B²⁹ -hl 0.11% 0.095% .

1 2 , () , DNA 383 472 , 214 826

1 Lys B²⁸ Pro B²⁹ -hl 7mM 3.5mg/Mℓ , m- 1.25mg/Mℓ, 1.09mg/Mℓ 16mg/Mℓ가 , 19.7μg/Mℓ 가 pH 3 , 가 Lys B²⁸ Pro B²⁹ -hl 가 pH 7.4 UV AVIV 14 DS - [Diabetes, 21 (2), (Pekar, A H.) (Veros, A. J.) 486-491(1972)] 1

Lys B²⁸ Pro B²⁹ -hl 30 Lys B²⁸ Pro B²⁹ -hl pH 7.3 7.4 : 3.5mg /Mℓ, 16mg/Mℓ, 7mM , m- 1.25mg/Mℓ, 1.09mg/Mℓ, 0.0245

mg/Mℓ, 3.5mg/Mℓ, 16mg/Mℓ, 7mM Lys B28 Pro B29 -hl pH 7.3 7.4 :
 , 30 , m- 1.25mg/Mℓ, 1.09mg/Mℓ. 7
 0.4M HPLC
 (9.4×250mm) 20μℓ (Dupont Zorbax) GF-250
). 0.5Mℓ/ 214nm 가
 2 2

Lys B28 Pro B29 -hl, Lys B28 Pro B29 -hl,
 , 3 , ,
 가 3.5mg/Mℓ 0.2mg/Mℓ Lys B28 Pro B29 -hl
 0.2μm (Gelman) 10Mℓ , pH 7.4 7mM
 SLS HPLC
 C 7

mM 가 가
 (Brookhaven) 2030AT (autocorrelator) (SLS)
 488nm (Lexel) 3500 90 °
 1mm 가 (Neslab) RTE-110 25
 0.1μm (Cantor, C. R.) (Schimmel, P. R.) [Biophysical Chemistry, (W. H.
 Freeman) 가 838-843(1982)] 3
 가 Lys B28 Pro B29 -hl 가
 Lys B28 Pro B29

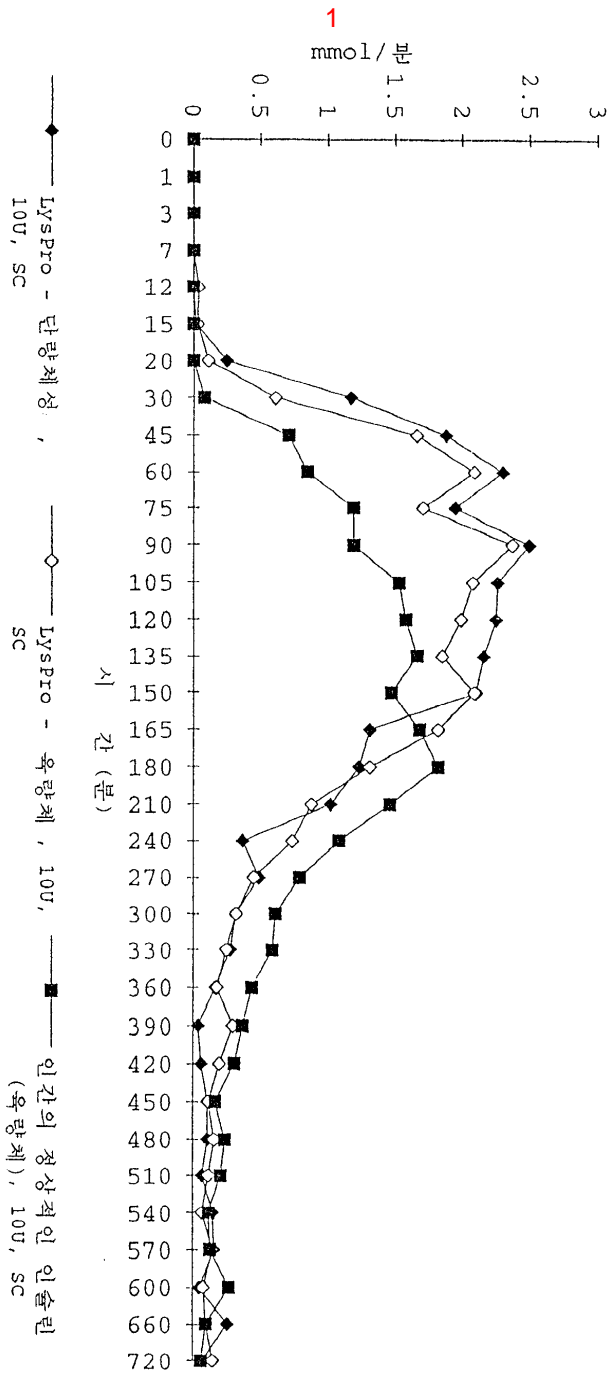
-hl
 (57)

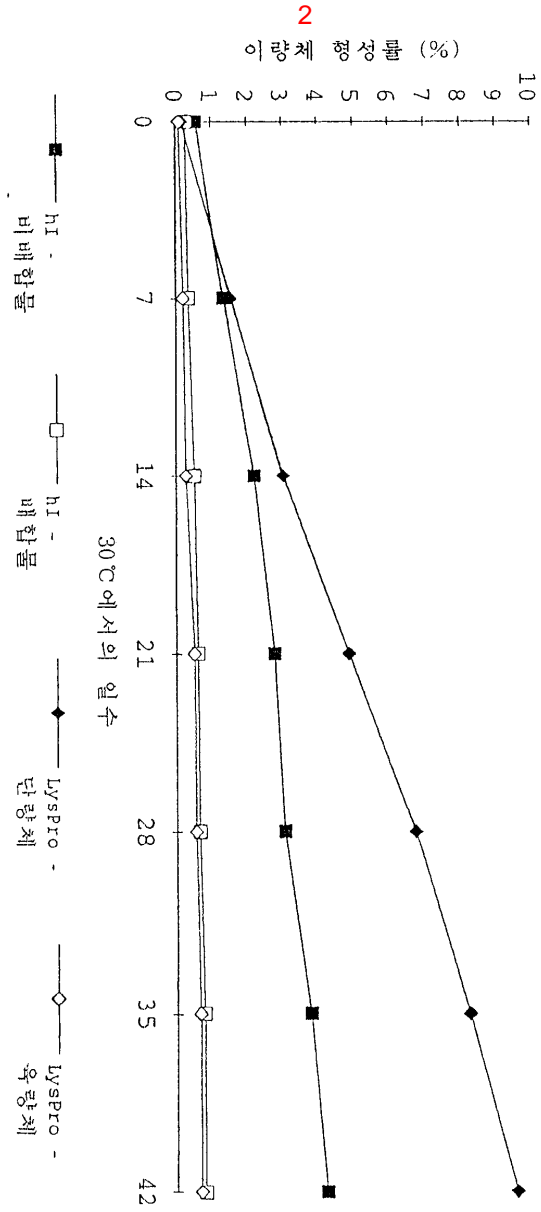
1. (a) B28 Pro가 Asp, Lys, Leu, Val, Ala , B29 Lys가 Lys Pro 6
 , (b) des(B28-B30)- , (c) des(B27)- 8
 ; 2 ; m- , , m-
 3 , ,
2. , 가 14 μg/Mℓ 35 μg/Mℓ , 가 23 mM 35
 mM 가 3.5 mg/mL
3. , , 가
4. , , 가
5. , 3.5mg/Mℓ, 19.7μg/Mℓ, 7mM, 16mg/
 Mℓ
6. 1 4 , 가 Lys B28 Pro B29 -
7. 5 , 가 29mM m-
 1 4 , 가 ASP B28 -

8.

7

가 m-





3

