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(12)

(KR)  
(B1)

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C07D 333/36

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(24)

2004 03 22  
10-0423875  
2004 03 09

(21) 10-2001-0077030  
(22) 2001 12 06

(65)  
(43)

10-2003-0046777  
2003 06 18

(73)

1

31

(72)

756

6 1405

2

912 408

103 1203

2 209-13

(74)

:

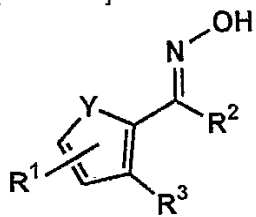
(54)

3

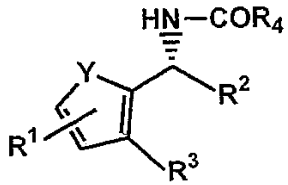
IV

가

[ I ]



[ IV ]



( I IV ,  
 $R^1$  , , , ,  
 $R^2$   $R^3$  , , , ,  
 $R^2$   $R^3$  가 , , , ,  
 $C_1$   $C_3$  , , , ,  $R^2$ - $R^3$  , , , ,  
 $n$  1 3  $C_1$  , X  $-(CH_2)_n-X-$  , , , ,  
 $Y$   $-CH=CH-$ ,  $-CH=N-$ , , , ,  
 $R^4$   $C_1$   $C_5$  .)

[ ]

[ ]

가

가

(Reetz, M.T; Schimossek, K. Chimia, 1996, 50. 668).

1-

(dynamic kinetic resolution)

가

가

9

, 75 77%

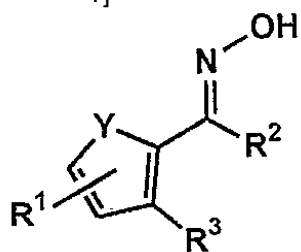
50 55

가

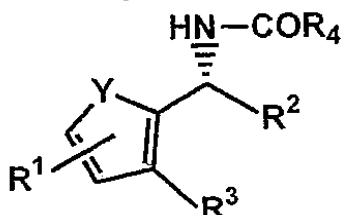
가

3, IV, 가,

[ I ]

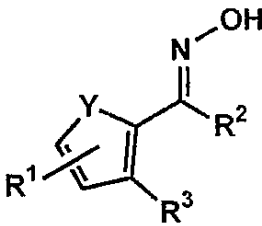


[ IV ]

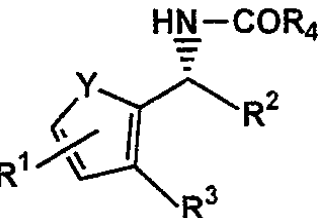


( I, IV, R<sup>1</sup>, R<sup>2</sup>, R<sup>3</sup>, R<sup>4</sup>, C<sub>1</sub>, C<sub>3</sub>, R<sup>2</sup>-R<sup>3</sup>, -(CH<sub>2</sub>)<sub>n</sub>-X, Y = -CH=CH-, -CH=N-, R<sup>4</sup> C<sub>1</sub>, C<sub>5</sub>.)

가가, (lipase), (d) onor), 3 [ I ]



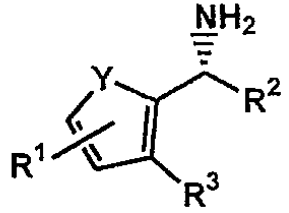
[ IV ]



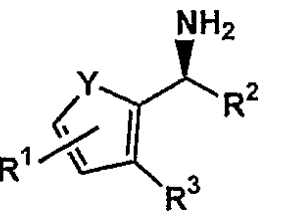
( I, IV, R<sup>1</sup>, R<sup>2</sup>, R<sup>3</sup>, Y, R<sup>4</sup> ) 30, 40, 100, 가, 3, 40, 70

(0가) (0가) , , , , ,  
 5 10% 5%  
 40 70 %  
 2 3.5 %가  
 IIR IIS

[ IIR]



[ IIS]



( IIR IIS , R 1 , R 2 R 3 .)

IV 가 , IIR  
 IIS 가 3 , IIR  
 , IV  
 , 가  
 lipase PS-C ( diatomite )  
 ( Candida antarctica lipase; ( Pseudomonas cepacia lipase:  
 esin) Novozym 435, Novo Nordisk Korea ) lipase PS-D, ),  
 ( immobilized on acrylic r

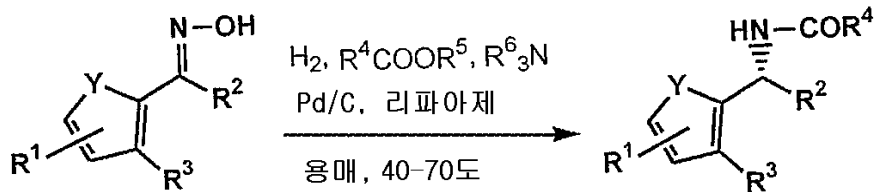
1 3 가 III , , 2,2,2-  
 , 2,2,2- 1 , 1.5 2

[ III ]  
 R 4 CO 2 R 5  
 ( III ,  
 R 4 ,  
 R 5 , , , C 1 C 3 , C 1 C 3 ,  
 .)

3 V , 1 5  
 [ V ]  
 R 6 3 N V , R 6 C 1 C 3 .)

0.25 , , , 가 , t-  
 0.05  
 , 가  
 가

[ II]



( 1) ( 5%, 34mg) , 40  
 30 5%, 34mg) (50mg, 0.37mmol),  
 435(Novo Nordisk Korea ) 100mg 3.6ml 가  
 (72.3μℓ, 0.74mmol) (193μℓ, 1.11mmol) 가  
 1 60 5 ( R )  
 -N- -1- 1.2N HCl 9 가  
 1H NMR 13C-NMR (Whelk-01 Chiraldex OD-H  
 ) , 80% , 95%ee  
 ( 2-8) 1 2 8  
 1 1-8 1

[ 1 ]

1		> 98%	80%	98%
2		> 98%	76%	98%
3		> 98%	84%	95%
4		> 98%	70%	97%
5		> 98%	89%	99%
6		> 98%	84%	97%
7		> 98%	81%	94%
8		> 98%	82%	96%

1 ,

(70-89%)

(94-99%ee)가

가

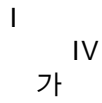
가

가

가

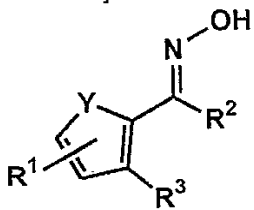
(57)

1.

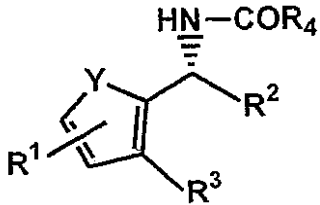


3

[ I ]



[ IV ]



( I IV ,

R<sup>1</sup> R<sup>2</sup> R<sup>3</sup> , , R<sup>2</sup> R<sup>3</sup>가 , ,  
 C<sub>1</sub> C<sub>3</sub> , R<sup>2</sup>-R<sup>3</sup> , -(CH<sub>2</sub>)<sub>n</sub>-X- ,  
 n 1 3 , X  
 Y -CH=CH-, -CH=N-,  
 R<sup>4</sup> C<sub>1</sub> C<sub>5</sub> .)

2.

1 , 가 , , , ,

3.

1 , 2  
 3.5%

4.

1 ,

5.

1 , 1 3 .

6.

1 , III

[ III ]

R<sup>4</sup>CO<sub>2</sub>R<sup>5</sup>  
 ( III ,  
 R<sup>4</sup> C<sub>1</sub> C<sub>5</sub> C<sub>1</sub> C<sub>3</sub> , C<sub>1</sub> C<sub>3</sub> ,  
 R<sup>5</sup> , , , .)

7.

1 , 1 1.5 2  
 .

8.

1 , 3 V .  
 [ V]

R<sup>6</sup><sub>3</sub>N V , R<sup>6</sup> C<sub>1</sub> C<sub>3</sub> .  
 ( )

9.

1 , 3 1 1 3 .

10.

1 , 40 70 .

11.

1 , , , , 3 가 0.05  
 0.25 .