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(12) (B1)

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G01N 33/53

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(24)

2004 03 30  
10-0425525  
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(43)

10-2002-0039458  
2002 05 27

(73)

4-2

(72)

8

305-603

(74)

:

(54)

MMP-8(matrix metalloproteinase-8)

MMP-8

1

1

MMP-8

IL-6

2

MMP-8

-

(receiver-operating characteristic curve)

3

(funitis)

MMP-8

4

MMP-8

-

5

MMP-8

6

MMP-8

-

MMP-8(matrix metalloproteinase-8)

( , preterm birth) (rupture of fetal membranes)

가

가 (Main

et al., *Am. J. Obstet. Gynecol.* , 151:892-898, 1985),

가 -17 (plasma estradiol-1

7 beta), (progesterone), C- (C-reactive protein)

가

(collagen) (fibrous connective tissue)

( *Obstet. Gynecol.* , 57:487-489, 1981).

( *Obstet.*

*Gynecol.* , 75:84-88, 1990), ( *FEBS Lett.*

*tters* , 244(2):315-318, 1989).

37 8 10% 5 가

가 가

가

30 40%가 (Butler NR., Bonham

DG., Prenatal mortality. The first report of the British perinatal mortality survey, Edinburgh, Churchill Living

stone, 115-145, 1963; Romero R., Avila C., Sepulveda W., *Preterm birth. Cause, prevention, and management*, McGraw-Hill Company, 97-136, 1993; Romero R., Mazor M., *Clin. Obstet. Gynecol.*, 31:553, 1990; Gibbs

RS., Romero R., Hiller SL., et al., *Am. J. Obstet. Gynecol.*, 166:1515, 1992).

가

MMP(matrix-metalloproteinase)

가 (prostagla

ndin) 가

(fetal inflammatory response syndrome, FIRS)

가

가 가

(cordocentesis)

(funisitis)

가 (Yoon BH., Romero R., Park JS., Kim CJ., Kim SH., Choi JH

., Han TR., *Am. J. Obstet. Gynecol.* , 182:675-81, 2000; Yoon BH., Romero R., Kim KS., Park JS., Ki SH., Ki

m BI., Jun JK.. *Am. J. Obstet. Gynecol.* , 181:773-9, 1999; Romero R., Gomez R., Ghezzi F., Yoon BH., Mazor

M., Edwin SS., Berry SM., *Am. J. Obstet. Gynecol.* , 179:186-93, 1998).

가 가 가

(Knauper V., Kramer S., Reinke H., Tschesche H., *Eur. J. Bioch*

*em.* , 189:295-300, 1990; Blaser J., Triebel S., Maasjosthusmann U., Romisch J., Krah-Mateblowski U., Fre

udenberg W., Fricke R., Tschesche H., *Clinic. Chim. Acta.*, 244:17-33, 1996; Segura-Valdez L., Pardo A., G

axiola M., Uhal BD., Becerril C., Selman M., *Chest.*, 117:684-94, 2000; Romanelli R., Mancini S., Laschinger

C., Overall CM., Sodek J., McCulloch CA., *Infect. Immun.* , 67:2319-26, 1999; Maymon E., Romero R., Pacora P., Gomez R., Athayde N., Edwin S., Yoon BH., *Am. J. Obstet. Gynecol.* , 183:94-9, 2000).

가가 MMP-8

MMP(matrix metalloproteinase)가 . MMP-8  
 , MMP-8 MMP-1, MMP-13 (extracellular matrix protein)  
 (interstitial collagenase)  
 (glycosylation) 70 kDa 85 kD 15 25 kD 60  
 (proenzyme form-full glycosylation) (rpoMMP-8) (trypsin), (chymo  
 G(cathepsin G) (organomercurial compound)

MMP-8

(gingival pocket)

(cavity)

(gingival crevicular fluid)

MMP-8

MMP-8

MMP-8

MMP-9

92 kDa 4 /  
(proMMP-9)  
( J. Biol. Chem. ,  
67 kDa

83 KDa  
267(30):21712-21719, 1992), "MMP-9"  
MMP-9  
MMP-9  
MMP-9

TNF-α, MCP-1, PGE2,  
cell), MIP-1, MCP-1,

-1 (interleukin-1 ), -1 (interleukin-1 ), GRO , RANTES,  
(angiogenin)

-6(interleukin-6), -8(interleukin-8),  
(white blood

MMP-8

MMP-8

MMP-8

MMP-8

MMP-8

MMP-8

[illegible]

( 7 ), MMP-8 ( 7 8 ). , (p<0.05)( 9 ).

MMP-8 가 MMP-8 가 / 2 3 MMP-8 가 / 가 가 MMP-8 MMP-8 3

MMP-8 ( 5 ), MMP-8 ( 5 6 , 11 ). 가 6 가

MMP-8 가 가 MMP-8

MMP-8

MMP-8 10 ng/ 15 ng/ml 53 ng/ml 26 ng/ml

MMP-8 MMP-8

MMP-8 MMP-8

1) MMP-8 ; 가

2) MMP-8 가 ;

3) 가 ;

4) 가

1 (polyvinyl) 96- (polystyren

e) 96- (peroxidase), (alkaline phosphatase), (biotin) FITC TRITC

4 4CN(4-chloro-1-naphtol), DAB(diaminobenzidine), AEC(aminoethyl carbazol), ABTS[2, 2'-azino-bis(3-ethylbenzothiazoline-6-sulfo-nic acid)], OPD(o-phenylenediamine) TMB(tetramethyl benzidine)가

MMP-8 MMP-8

가 MMP-8 가 MMP-8

가 MMP-8 450 nm (horseradish multiclona antibody), (monoclonal antibody) (biotinylated rab

bit multiclona antibody) MMP-8

MMP-8 MMP-8 MMP-8

MMP-8 가 MMP-8

MMP-8 2 (biological microchip)

MMP-8 가

MMP-8 2

< 1>

MMP-8 -6(interleukin-6, IL-6)가

가  
 , 32 23 46 가  
 MMP-8 IL-6 ELISA  
 ,  
 MMP-8 7.0 [0.3-108.1] ng/M $\ell$  1.1 [<0.3-9.8]  
 ng/M $\ell$  IL-6 0.45 [0.02-8.94] ng/M $\ell$  0.10 [0.  
 002-1.70] ng/M $\ell$   
 가 (p<0.0001)( 1 ).  
 , MMP-8 가 10 ng/M $\ell$   
 , MMP-8 10 ng/M $\ell$   
 48%(11/23), 100%(46/46) 0.6 ng/M $\ell$   
 44%(10/23), 98%(45/46) ( 2 ). , MMP-8 IL-6  
 가 MMP-8 10 ng/M $\ell$   
 MMP-8 IL-6

< 2> MMP-8  
 MMP-8 , MMP-8

( < 36 ), 72  
 246 , MMP-8

<2-1>

가  
 (blood agar), (McConkey's agar), 6A (Bactec 6A  
 vial), (thioglycollate) , (brucellar blood agar),  
 B(horse serum penicillin polymyxin B) B(amphotericin B)  
 - (pleuropneumoni-like organism) , (Mycotrim) GU  
 (Mycoplasma)

<2-2> MMP-8  
 700g 10 . MMP-8  
 MMP-8 ELISA (Amersha  
 m pharmacia biotech, UK).

<2-3>  
 (paraffin) , (chorionic plate), 10% (formalin)  
 osin) (slide) (hematoxylin) (e

가  
 235 45 가 19%  
 246 115 가 47%  
 MMP-8 191.4 ng/M $\ell$  4.6 ng/M $\ell$   
 MMP-8 가 (p<0.0001)( 1 ).  
 (75.6%) MMP-8 (91.7%) ( 2 ).  
 15 ng/M $\ell$   
 1.0 ng/M $\ell$  160.9 ng/M $\ell$   
 (p<0.0001)( 3 ).  
 , MMP-8 15 ng/M $\ell$  MMP-8  
 (73.9%), (87.0%), (83.3%) (79.2%) ( 4 ).  
 < 1> MMP-8

	(ng/mL)	(ng/mL)
	191.4	0-4202.7
	4.6	0-3929.0

< 2> MMP-8

	75.6%
	64.2%
	33.3%
	91.7%

## &lt; 3&gt; MMP-8

	median(ng/mL)	range(ng/mL)
	160.9	0.1 - 4202.7
	1.0	0 - 766.2

## &lt; 4&gt; MMP-8

	73.9%
	87.0%
	83.3%
	79.2%

## &lt; 3&gt; MMP-8

2 MMP-8

246 ( < 36 ), 72 (Wharton jelly) 가  
 245 57 2 MMP-8 23% MMP-  
 8 MMP-8 가 433.7 ng/Ml MMP-  
 -8 2.4 ng/Ml (p<0.0001)( 5 3 ).  
 MMP-8 (receiver-operating characteri  
 stic curve) MMP-8 26 ng/Ml (89%)  
 (78%) ( 4 ), MMP-8 ( 6 ).  
 (96%)

## &lt; 5&gt; MMP-8

	(ng/mL)	(ng/mL)
	433.7	1.5 - 3836.8
	2.4	0 - 4202.7

## &lt; 6&gt; MMP-8

	89% (51/57)
	78% (148/189)
	55% (51/92)
	96% (148/154)

## &lt; 4&gt; MMP-8

3 MMP-8  
MMP-8 가

가

MMP-8

MMP-8 ( < 36 ), 72

214 , , , 72  
가 5000 cell/mm<sup>3</sup>  
24000 cell/mm<sup>3</sup> , 가 1800 cell/mm<sup>3</sup> ,  
가 5 (cell) , 가 15 mm/min , C-  
80000 cell/mm<sup>3</sup> , ,  
2가 0.4 가 가 ,  
7 (Bancalari) 3 가 28  
50 mmHg , , 28  
가 (McNenamin) 24  
(feeding intolerance) , ,  
MMP-8  
2 214 102 48%  
MP-8 , MMP-8 가 36.8 ng/M $\ell$  M  
2.7 ng/M $\ell$   
MMP-8 가 (p<0.0001)( 7 ).  
MMP-8 - MMP-8  
15 ng/M $\ell$  MMP-8  
(72.1%), (63.5%), ( 62.5%)  
MMP-8 ( 8 ).  
MMP-8 208.9 ng/M $\ell$   
6.5 ng/M $\ell$  MMP-8 가  
(p<0.05)( 9 ).  
MMP-8 15 ng/M $\ell$  MMP-8  
(66.7%), (60.1%) (98.4%)가 ( 10 ) .  
< 7> MMP-8

	(ng/mL)	(ng/mL)
	36.8	0.1 - 4202.7
	2.7	0 - 870.8

## &lt; 8&gt; MMP-8

	52.9%
	72.1%
	63.5%
	62.5%

## &lt; 9&gt;

## MMP-8

	(ng/mL)	(ng/mL)
	208.9	2.4 - 1568.6
	6.5	0 - 4202.7

## &lt; 10&gt; MMP-8



	66.7%
	60.1%
	4.8%
	98.4%

< 5> MMP-8

35 116

3 . . MMP-8 2 , ,

3 (Vojta) , ,

MMP-8 153.9 ng/M $\ell$  [ < 0.3 - 1535.9] 6.4 ng/

M $\ell$  [ < 0.3 - 3836.8] MMP-8

가 (p<0.01)( 5 ). 가 가

MMP-8 가 6 가 (o

dds ratio, 6.0; 95% , 1.1 - 33.0; p<0.05).

MMP-8 - MMP-8

53 ng/M $\ell$  ( 6 ), MMP-8

(76.9%), (74.8%) (95.1%)

( 11 ).

< 11> MMP-8

	76.9%
	74.8%
	28.6%
	95.1%

MMP-8

MMP-8

MMP-8

가

(57)

1. MMP-8(matrix metalloproteinase-8) MMP-8
- 2.
- 3.
4. 1 , MMP-8 가 5 ng/M $\ell$  100 ng/M $\ell$
5. 1 , MMP-8 가 10 ng/M $\ell$
6. 1 , MMP-8 가 26 ng/M $\ell$

7.

3 , MMP-8 가 53 ng/M $\ell$  가

8.

3 , MMP-8 가 15 ng/M $\ell$  가

9.

10.

- 1  
 1) MMP-8 ;  
 2) MMP-8 가 가 ;  
 3) ( ) MMP-8 가  
 ;  
 4) 가

11.

10 , 1 MMP-8

12.

10 , 1 (polyvinyl) 96- ,  
 (polystyrene) 96-

13.

10 , 3 (peroxidase), (alkalin  
 e phosphatase) (biotin)

14.

10 , 3 FITC TRITC

15.

10 , 4 4CN(4-chloro-1-naphtol), DAB(dia-  
 minobenzidine), AEC(aminoethyl carbazole), ABTS[2,2'-azino-bis(3-ethyl-benzo-  
 thiazoline-6-sulfonic acid)], OPD(o-phenylenediamine), TMB(tetramethyl benzidine)

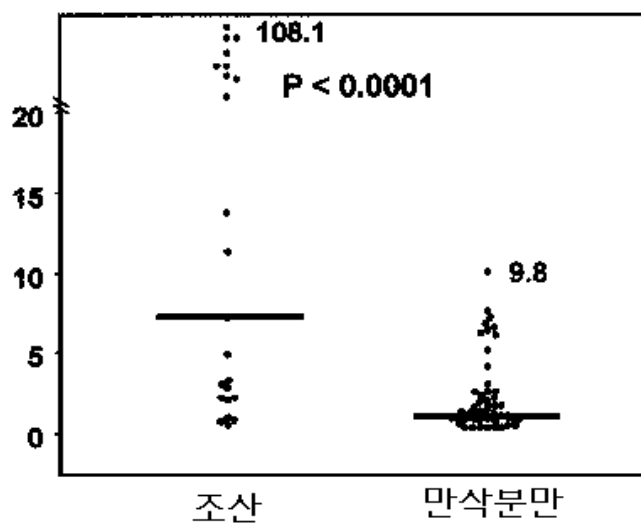
16.

1

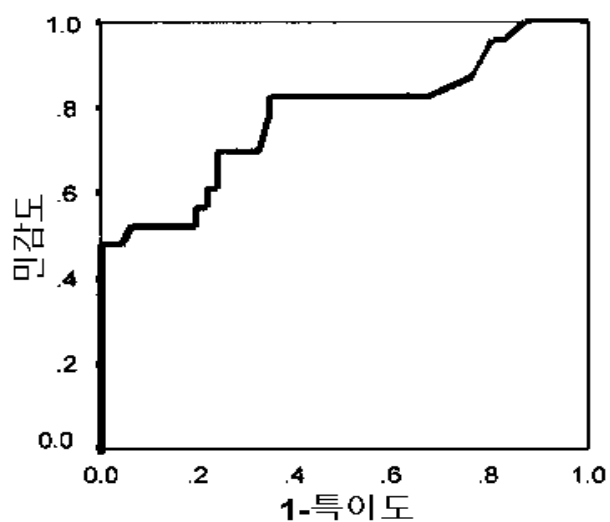
17.

16 , ( MMP-8 , MMP-8, ,  
 ( ) 2 ,

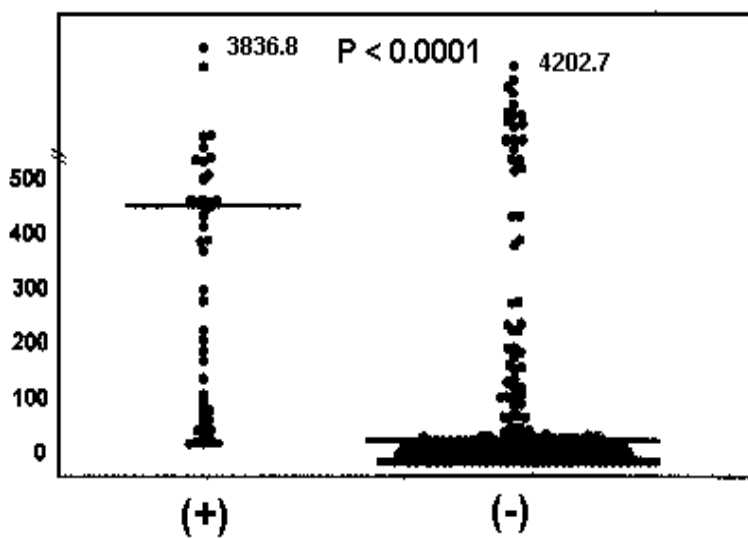
1



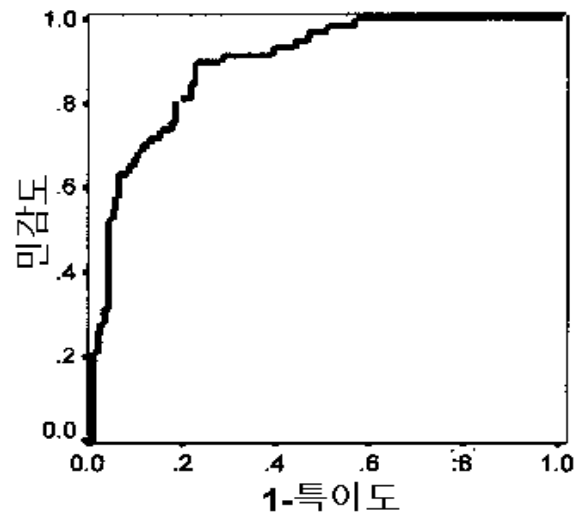
2



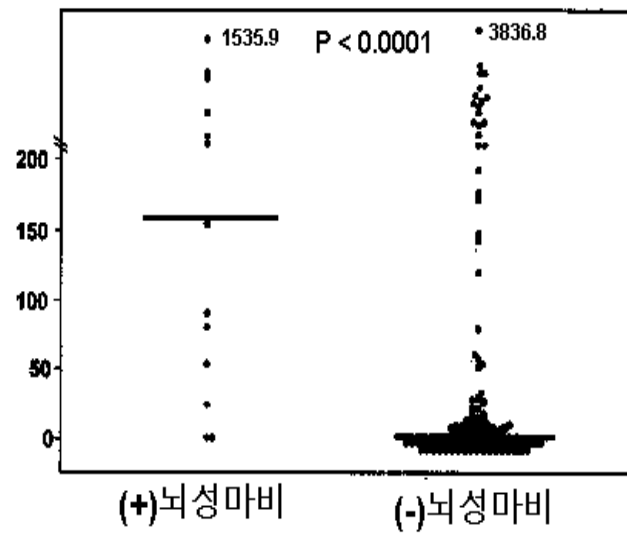
3



4



5



6

