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(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

가

(Main

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

7 beta),

(progesterone), C-

가

(C-reactive protein)

(collagen)

(fibrous connective tissue)

-17

(plasma estradiol-1

가

Gynecol., 75:84-88, 1990),
tters, 244(2):315-318, 1989).

37

8 10%

5

가

가

30 40% 가 (Butler NR., Bonham DG., Prenatal mortality. The first report of the British perinatal mortality survey, Edinburgh, Churchill Livingstone, 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).

ndin)

가

가

MMP(matrix-metallocproteinase)

(prostagla

(fetal inflammatory response syndrome, FIRS)

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., Kim 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. Biochem.*, 189:295-300, 1990; Blaser J., Triebel S., Maasjosthusmann U., Romisch J., Krahlf-Mateblowski U., Freudenberg W., Fricke R., Tschesche H., *Clinic. Chim. Acta.*, 244:17-33, 1996; Segura-Valdez L., Pardo A., Gaxiola 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-8	MMP(matrix metalloproteinase) (extracellular matrix protein), , MMP-8 MMP-1, MMP-13	가 . MMP (interstitial collagenase)
	(proenzyme form - full glycosylation) 85 kD 70 kDa . MMP-8 (rpoMMP-8)	(glycosylation) 15 25 kD 60 (trypsin), (chymo)
trypsin), G(cathepsin G) compound)		(organomercurial
	MMP-8	

MMP-8 가 (5,736,341). MMP-8
 (gingival pocket) (cavity) (gingival crevicular fluid)
 MMP-8

MMP-9, MMP-9, 가
30 40% 가, 가, 가
-6(unterleukin-6), -8(interleukin-8),
-1 (interleukin-1), GRO , RANTES, (white blood
cell), MIP-1 , MCP-1, PGE2,
(angiogenin) 가, 가, 가

MMP - 8

MMP-8

MMP - 8

MMP-8

MMP-8 . MMP-8
 , 85 kDa 60

70 kDa MMP-8 가 가 MMP-8 가
MMP-8 MMP-8 1, 2, 3 가
II, collagen), , 1 (type I collagen) 가 . MMP-8 (type ,

MMP-8

- 1) MMP - 8 ;
2) MMP - 8(matrix metalloproteinase)

MMP-8
ELISA(enzyme-linked immunosorbant assay)
MMP-8

MMP-8
MMP-8

MMP-8 ELIZA 72 가 MMP-8 가 MMP-8 가 (1 4).
가 MMP-8 , MMP-8 가 MMP-8 가 .
가 MMP-8 , MMP-8 .

(fetal inflammatory response syndrome, FIRS)

(, funisitis) 가 가

가 MMP-8 가 () , MMP-8 ,
 가 MMP-8 , (5 6, 3) .
 P-8 4).

MMP - 8

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

MMP-8 IL-6

< 2> MMP-8

MMP-8

MMP-8

246

(< 36), 72
MMP-8

<2-1>

가
(blood agar), 6A (Bactec 6A
vial), (thioglycollate), (brucellar blood agar),
B(horse serum penicillin polymixin B) B(ampoterin B)
(pleuropneumoni-like organism) (Mycotrim) GU
(Mycoplasma)

<2-2> MMP-8

700g 10

MMP-8

MMP-8 (Amersham
m pharmacia biotech, UK).

<2-3>

osin)
가
(paraffin), (chorionic plate), 10% (formalin)
(slide) (hematoxylin) (e

235 45

가 19%

246 115

가 47%

MMP-8

4.6 ng/mL

MMP-8 가

191.4 ng/mL

(p<0.0001)(1).

(75.6%)

MMP-8

15 ng/mL

MMP-8

(91.7%)

(2).

MMP-8 가

160.9 ng/mL

MMP-8

가

가

1.0 ng/mL

(p<0.0001)(3).

MMP-8

(73.9%), (87.0%),

15 ng/mL

MMP-8

(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%

< 3> MMP-8

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

< 4> MMP-8

	73.9%
	87.0%
	83.3%
	79.2%

< 3> MMP-8

2 MMP-8

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

< 5> MMP-8

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

< 6> MMP-8

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

< 4> MMP-8

3 MMP-8 가

, , , , , MMP-8

MMP-8 (< 36), 214	72			
,	,	,	,	,
24000 cell/mm ³ , 가 5 (cell)	1800 cell/mm ³ , 가 15 mm/min	72 5000 cell/mm ³ 가 0.2 , C-		
80000 cell/mm ³ , 2가	,		가 가 ,	
,	0.4			
7 (Bancalari)	3		가 28	28
,	,	,	,	가
50 mmHg 가				24
(McNenamin) (feeding intolerance)	,	,	,	MMP-8
2 214 102	48% MMP-8	가	36.8 ng/Mℓ	M
MMP-8 2.7 ng/Mℓ 가 (p<0.0001)(7).				MMP-8
MMP-8 15 ng/Mℓ MMP-8 (8).	(72.1%), MMP-8		(63.5%), MMP-8	(
62.5%)				
,				
6.5 ng/Mℓ (p<0.05)(9).	MMP-8 208.9 ng/Mℓ MMP-8 가			MMP-8
MMP-8 15 ng/Mℓ (66.7%), (60.1%) MMP-8	(98.4%)가		(10) .	
< 7>				
	(ng/mL)		(ng/mL)	
	36.8		0.1 - 4202.7	
	2.7		0 - 870.8	

< 8> MMP-8

52.9%
72.1%
63.5%
62.5%

< 9>

MMP-8

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

< 10> MMP-8

	66.7%
	60.1%
	4.8%
	98.4%

< 5> **MMP-8**
 35 116
 3 2 , ,
 3 (Vojta) ,
 , MMP-8 153.9 ng/Mℓ [< 0.3-1535.9] 6.4 ng/
 Mℓ[< 0.3-3836.8] 가 MMP-8 가 가
 (p<0.01)(5). 가 6 가
 MMP-8 , 1.1-33.0; p<0.05). (o
 dds ratio, 6.0; 95% (11).
 MMP-8 (6), MMP-8 (95.1%)
 53 ng/Mℓ (76.9%), (74.8%)

< 11> MMP-8

	76.9%
	74.8%
	28.6%
	95.1%

(57)

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

7.

3 , MMP-8 가 53 ng/Mℓ 가

8.

3 , MMP-8 가 15 ng/Mℓ 가

9.**10.**

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

11.

10 , 1 MMP-8

12.

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

13.

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

14.

10 , 3 FITC TRITC

15.

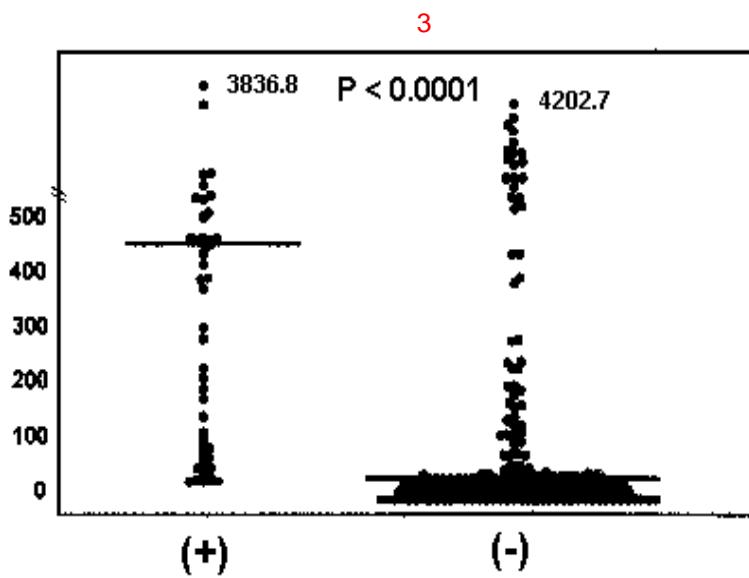
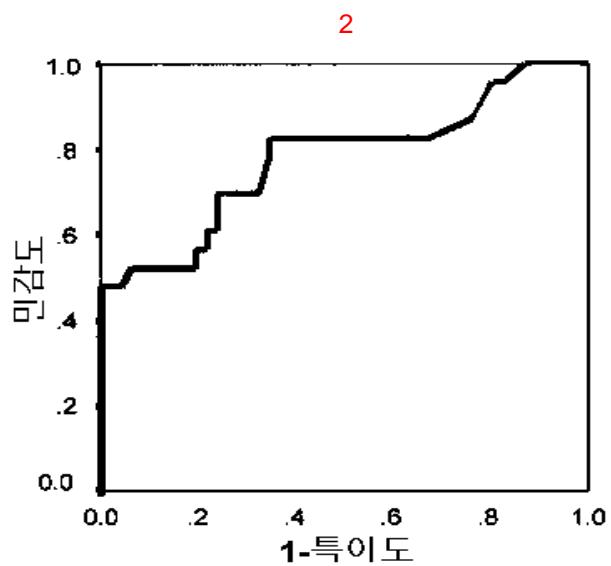
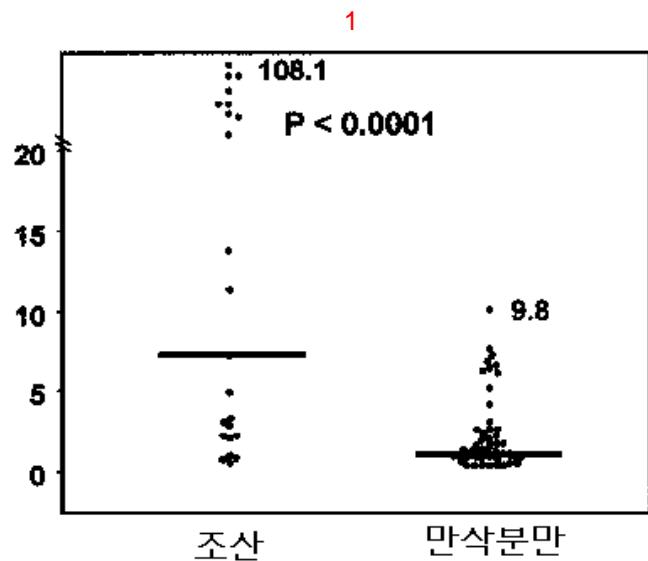
10 , 4 4CN(4-chloro-1-naphtol), DAB(diaminobenzidine), AEC(aminoethyl carbazole), ABTS[2,2'-azino-bis(3-ethyl-benzothiazoline-6-sulfonic acid)], OPD(o-phenylenediamine), TMB(tetramethyl benzidine)

16.

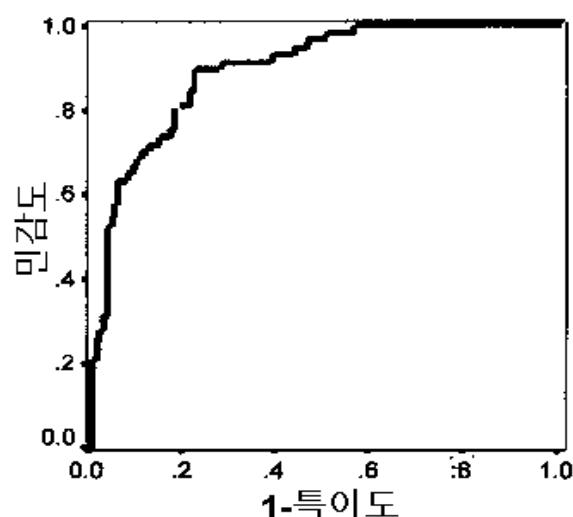
1

17.

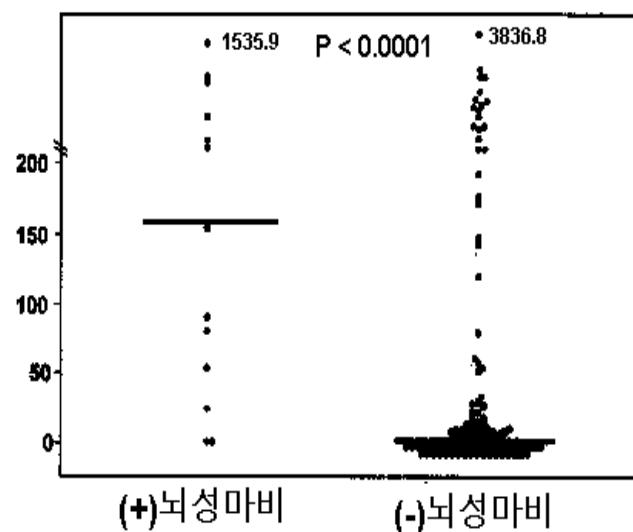
16 , (MMP-8 , MMP-8, , , ,



4



5



6

