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*

: 6 :

(73)

204-1

(72)

102

1201

165-23

( )

(74)

(54)

(57)

, , ,

. ,

, ,

.

(72)

89

930 114 20 328 106

2

104 801

1

(Abelliophyllum distichum) .

2

(Abelliophyllum distichum) .

3

1 2 , 0.001-30.0 % .

4

1 2 , (a) , 1-4 , , , , , 1,3- , (b) (c) .

5

1 2 , , , , , , , (O/W) (W/O) .

6

1 2 .

[0001] , , , , , .

[0002] . . , , , , .

[0003] , , , , . (collagen), (hyaluronic acid), (elastin), (proteoglycan), (fibronectin) DNA , , .

[0004] .

.

[0005]

[0006]

[0007]

[0008] (Abelliophyllum distichum)

[0009] 0.001-30.0 %

[0010] (a) 1-4 1,3- (b) (c)

[0011] (O/W) (W/O)

[0012]

[0013] MMP MMP

[0014]

[0015]

[0016]

[0017] (*Abelliophyllum distichum,* Nakai) 2 3-8cm 0.5-3.0cm 3-4 25mm 2 9 White forsythia (for.lilacinum), (for. eburneum), (for. viridicalycinum),

(var. rotundicarpum) .

[0018] , ‘ ’ (: , , , ,
,) , , , , ,
’ , , , . .

[0019] , , ,
, , , , ,
, , , , , ,
1 , , 70%
, 70% .

[0020] , ,
.

[0021] , ,
. , , ,
, - , (,
’) ,
.

[0022] , , ,
.

[0023] , 0.0001 ~ 30.0 % ,
0.001~ 15.0 % . 0.0001 % ,
’ , , 30.0 %
, .

[0024] , (1 2), MMP-1 (3),
MMP-1 (4), (5), (6),
(7), (8) . ,
, ,
, ( ) .

[0025] ,
, , , , ,
, .

[0026] , ,
, , , , , , , , , - , ,
, , ,
. , , , , , , , ,
, , , . .

[0027] , , , , ,
, , , , , , ,
.

[0028] , , ,
’ ,
, / .

[0029] , ,
, , , , , , ,
, 1,3- , ,
.

[0030] , ,
,
, , , ,
.

[0031] - ,
, , , , ,
, , , , ,
, , .

[0032] , ,
, , .

[0033] . ,
.

[0034] ,
.
, .

[0035] , ,
. , , ,
, , ,
, , , ,
.

[0036] ,
, , .

[0037] , .
,
.

[0038] **1:**

[0039] 70%(V/V) 5 3 ,
(Whatman) #5 . 50 .
1% 30% / .

[0040] **1: NBT**

[0041] 1
, BHT(Butylated Hydroxytoluene)0.01% , NBT
.

[0042] NBT
, .
. (Nitro Blue Tetrazolium;NBT)
560nm .

[0043] ,

[0044] 1. 0.05M Na_2CO_3 ------------------------------------ 2.4ml

[0045] 2. 3mM --------------------------------- 0.1ml

[0046] 3. 3mM EDTA ----------------------------------- 0.1ml

[0047] 4. BSA --- 0.1ml

[0048] 5. 0.72mM NBT ---------- 0.1ml

[0049] 6. ---------- 0.1ml

[0050] 7. 6mM $CuCl_2$ ---------- 0.1ml

[0051] 1,2,3,4,5 (1 BHT) 0.1ml(: 0.01, 0.1, 1.0%) 25 10 .

[0052] 6 25 20 .

[0053] 7 560nm St .

[0054] Bt .

[0055] , (Blank) 6 Bo .

[0056] 1 , 1 .

1

[0057] (%) = 1-(St-So)/(Bt-Bo) X 100

[0058] St : 560nm

[0059] Bt : 560nm

[0060] So : 560nm

[0061] Bo : 560nm

1

[0062]

	(%)	(%)
	0.01	26.3
	0.1	55.6
	1.0	82.3
BHT	0.01	89.2

[0063] 1 , 0.01-1.0% , . , (1.0%) BHT .

[0064] **2: DPPH**

[0065] 1 C DPPH .

[0066] DPPH DPPH(2,2-Di(4-tert-octylphenyl)-1-picrylhydrazyl) . DPPH 560nm .

[0067] 2,2-Di(4-tert-octylphenyl)-1-picrylhydrazyl (Aldrich Chem. Co., MW=618.76)0.1mM 61.88mg 100ml .

[0068] ,

[0069] 96- 0.1mM DPPH 0.15ml 0.15ml 25 10 .

[0070] 560nm St .

[0071] Bt .

[0072] , (Blank) 0.1mM DPPH Bo .

[0073] 2 , 2 . C(0.01%) .

2

[0074] (%) = 1-(St-So)/(Bt-Bo) X 100

[0075] St : 560nm

[0076] Bt : 560nm

[0077] So : 560nm

[0078] Bo : 560nm

2

[0079]

	(%)	(%)
	0.10	45.8
	0.50	86.5
C	0.01	86.1

[0080] 2 , 0.50% C ( ) .

[0081] **3. MMP-1**

[0082] (,) 48- (Nunc,) 1×10^6 , DMEM (Sigma,) 37 24 1 DMEM DMEM 48 . , MMP-1 (Amersham,) MMP-1 (ng/) , 3 MMP-1 , 3 . , MMP-1 TGF-β (10ng/ml, Roche,) .

3

[0083] MMP-1 (%)=1-(MMP-1 / MMP-1)?100

3

[0084] MMP-1 (%)

	MMP-1 (%)
TGF-β	68.5
(0.5%)	43.5
(1.0%)	65.8

[0085] 3 , MMP-1 , 1.0% TGF-β MMP-1 .

[0086] **4. MMP-1**

[0087] MMP-1 . MMP-1 . UVA 3 .

1 , .
TGF-β(10ng/mL) . MMP-1 3 ,
4 .

4

[0088] MMP-1 (%)

	MMP-1 (%)
TGF-β	78.5
(0.5%)	56.5
(1.0%)	85.8

[0089] 4 , MMP-1
, 1.0% MMP-1 TGF-β .

[0090] **5.**

[0091] 48- 1×10^6 , DMEM
24 . 1 DMEM ( )
DMEM ( ) 48 .

[0092] , (Takara,) (procollagen) I C-
(PICP) ng/ , .
TGF-β(10ng/mL) . 4 ,
5 .

4

[0093] (%)= / × 100

5

[0094]

	(%)
TGF-β	165.6
(0.5%)	132.5
(1.0%)	183.8

[0095] 5 , TGF-β
.

[0096] **6: B16F1**

[0097] 1 B16F1
. B16F1
, .
. B16F1 ATCC(American Type
Culture Collection) .

[0098] B16F1 . B16F1 6
1×10^5
72 . 72 -EDTA
. (Lotan: Cancer Res., 40: 3345-3350, 1980)
. PBS 1 (50 mM , pH 6.8, 1%

Triton X-100, 2 mM PMSF) 1ml 5 . (3,000 rpm, 10)
1N NaOH(10% DMSO)
405nm (%) .
B16F1 (%) 5 , 6
. IC_{50} 50% .

.

5

[0099] (%) = [(A-B)/A]X100

[0100] A :

[0101] B :

6

[0102]

(%)	(%)
0.5%	35.9
1.0%	75.8
(0.1%)	58.9

[0103] 6 ,
, .

[0104] **7.**

[0105] 1 (1)
, (1)
.

[0106] , 7 . (20 -35
) 20 1 1 1
2 3 .

[0107] 2 (cutometer SEM 575, C+K Electronic Co., Germany) . 8 Cutometer SEM 575 R8 R8 (viscoelasticity) .

7

[0108]

	1	1
	3.0	-
	2.0	2.0
	2.2	2.2
	1.5	1.5
	1.0	1.0
60	1.5	1.5
	0.6	0.6
	1.0	1.0
	3.0	3.0
	5.0	5.0
	5.0	5.0
	1.0	1.0
	0.1	0.1
	5.0	5.0
	3.0	3.0
	1.0	1.0
	4.0	4.0
, ,		
	100	100

[0109] % .

8

[0110]

	(R8)
1	0.28
1	0.12

[0111] 8 , 1
(1) 2.5
.

[0112] **8.**

[0113] 7 (1 1) ,
.

[0114] 22 45% 24
(2 /1) 4
.
(Corneometer CM825, Courage + Khazaka ,) . 9
.

9

[0115]

	1	1
0	25.6	24.4
4	38.7	26.2
4 -0	13.1	1.8

[0116] 9 , (1) (1) .