Fig. 1

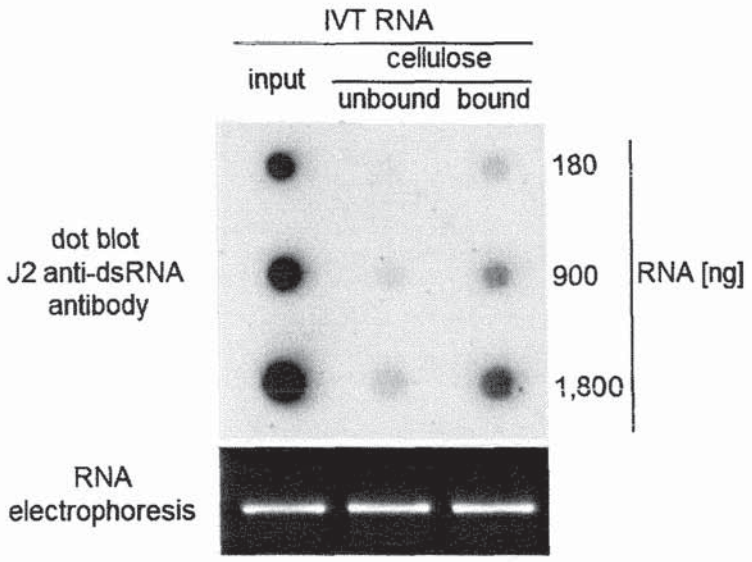

IVT RNA
input
cellulose
unbound
bound
180
900
1,800
RNA [ng]
dot blot
J2 anti-dsRNA
antibody
RNA
electrophoresis

Fig. 2

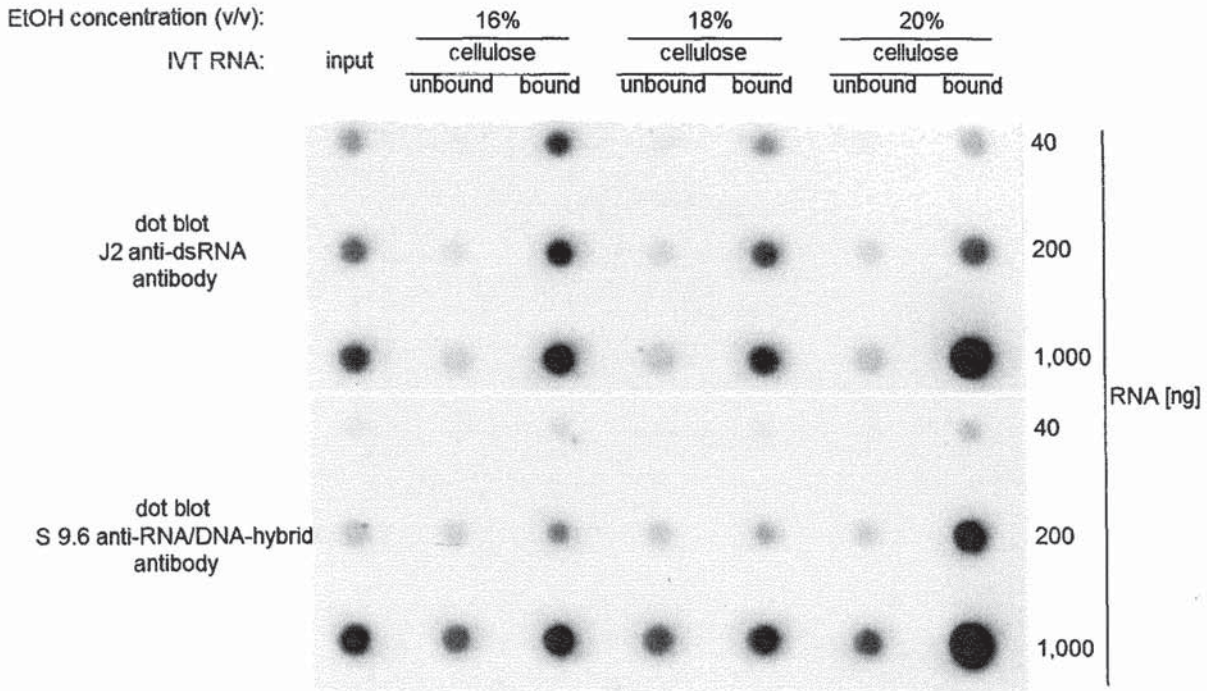

EtOH concentration (v/v):
16%
18%
20%
IVT RNA:
input
cellulose
unbound
bound
40
200
1,000
RNA [ng]
dot blot
J2 anti-dsRNA
antibody
dot blot
S 9.6 anti-RNA/DNA-hybrid
antibody

Fig. 3

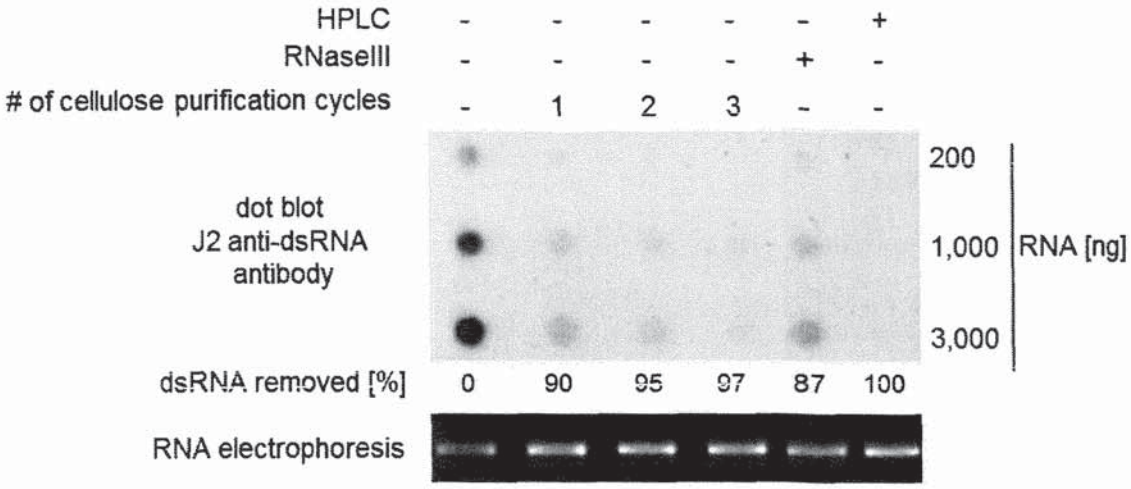

HPLC - - - - - +
RNaseIII - - - - + -
# of cellulose purification cycles - 1 2 3 - -
dot blot
J2 anti-dsRNA
antibody
200
1,000
3,000
RNA [ng]
dsRNA removed [%] 0 90 95 97 87 100
RNA electrophoresis

Fig. 4

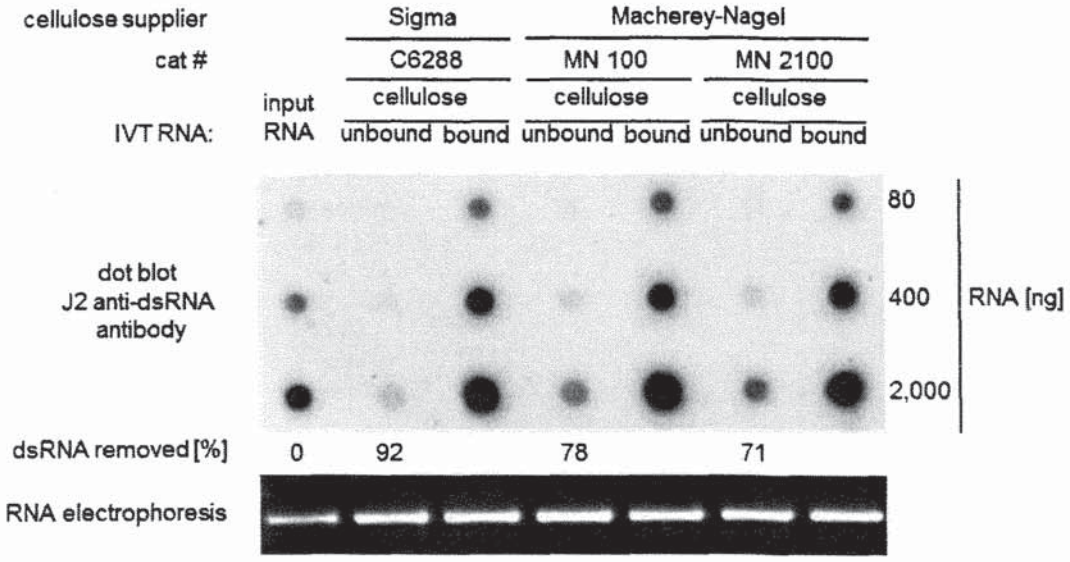

cellulose supplier
Sigma
Macherey-Nagel
cat #
C6288
MN 100
MN 2100
cellulose
cellulose
cellulose
input
RNA
IVT RNA:
unbound bound unbound bound unbound bound
dot blot
J2 anti-dsRNA
antibody
80
400
2,000
RNA [ng]
dsRNA removed [%] 0 92 78 71
RNA electrophoresis

Fig. 5

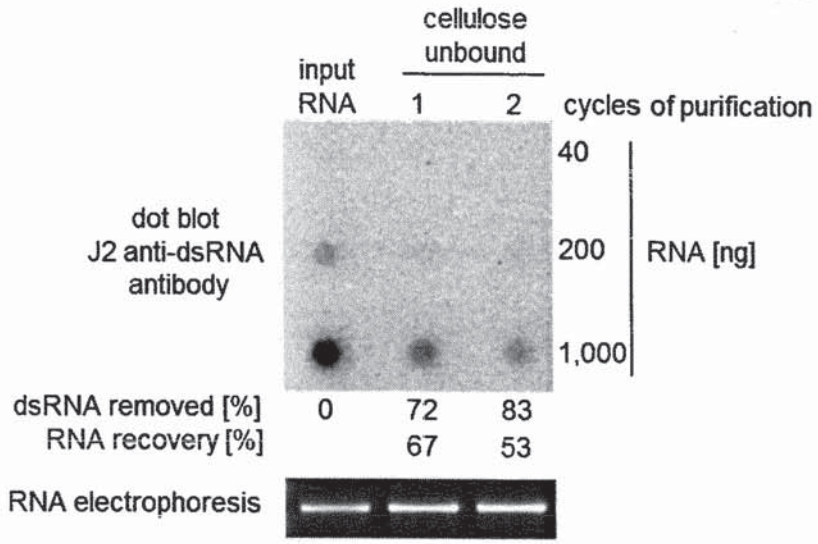

cellulose
unbound
input
RNA
1
2
cycles of purification
40
200
1,000
RNA [ng]
dot blot
J2 anti-dsRNA
antibody
dsRNA removed [%]
0
72
83
RNA recovery [%]
67
53
RNA electrophoresis

Fig. 6

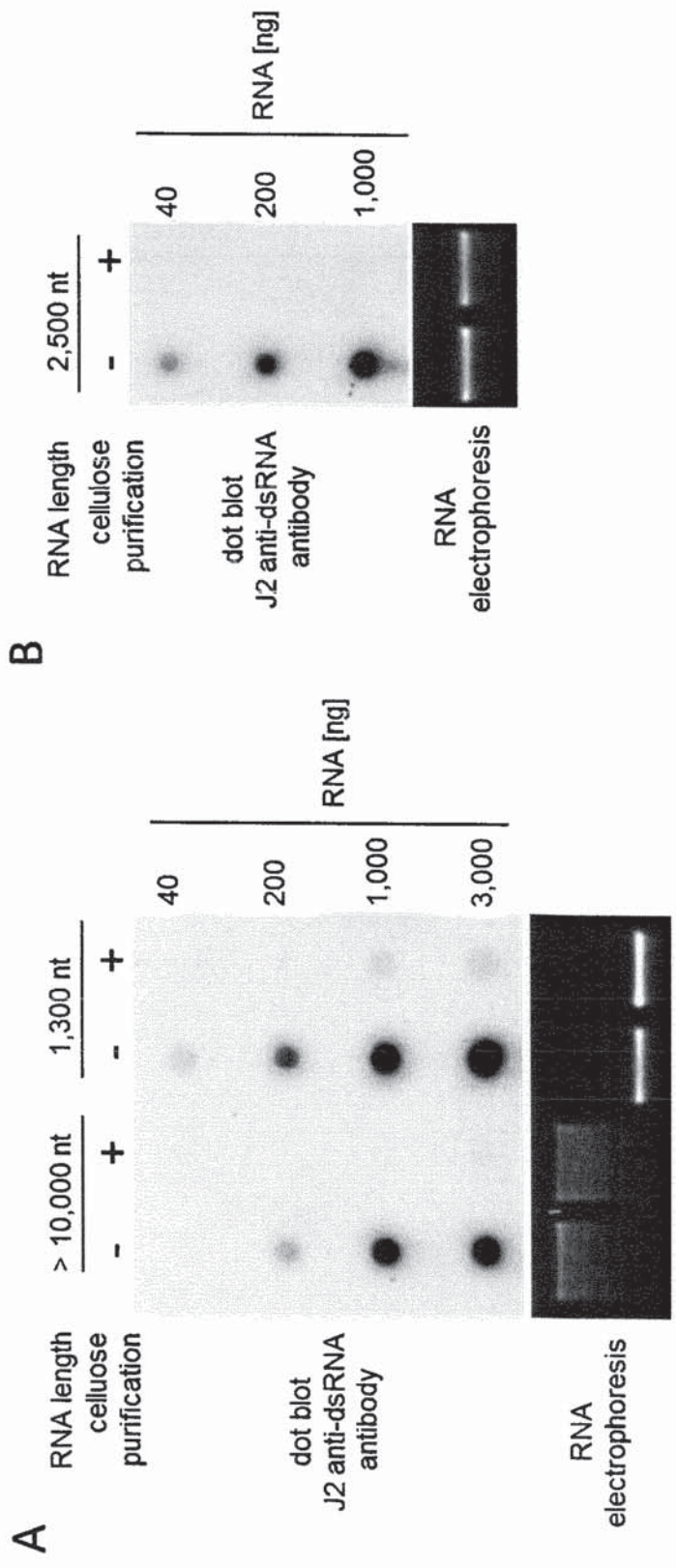

A
RNA length
cellulose purification
> 10,000 nt
- +
1,300 nt
- +
dot blot J2 anti-dsRNA antibody
RNA electrophoresis
40
200
1,000
3,000
RNA [ng]
B
RNA length
cellulose purification
2,500 nt
- +
dot blot J2 anti-dsRNA antibody
RNA electrophoresis
40
200
1,000
RNA [ng]

Fig. 7

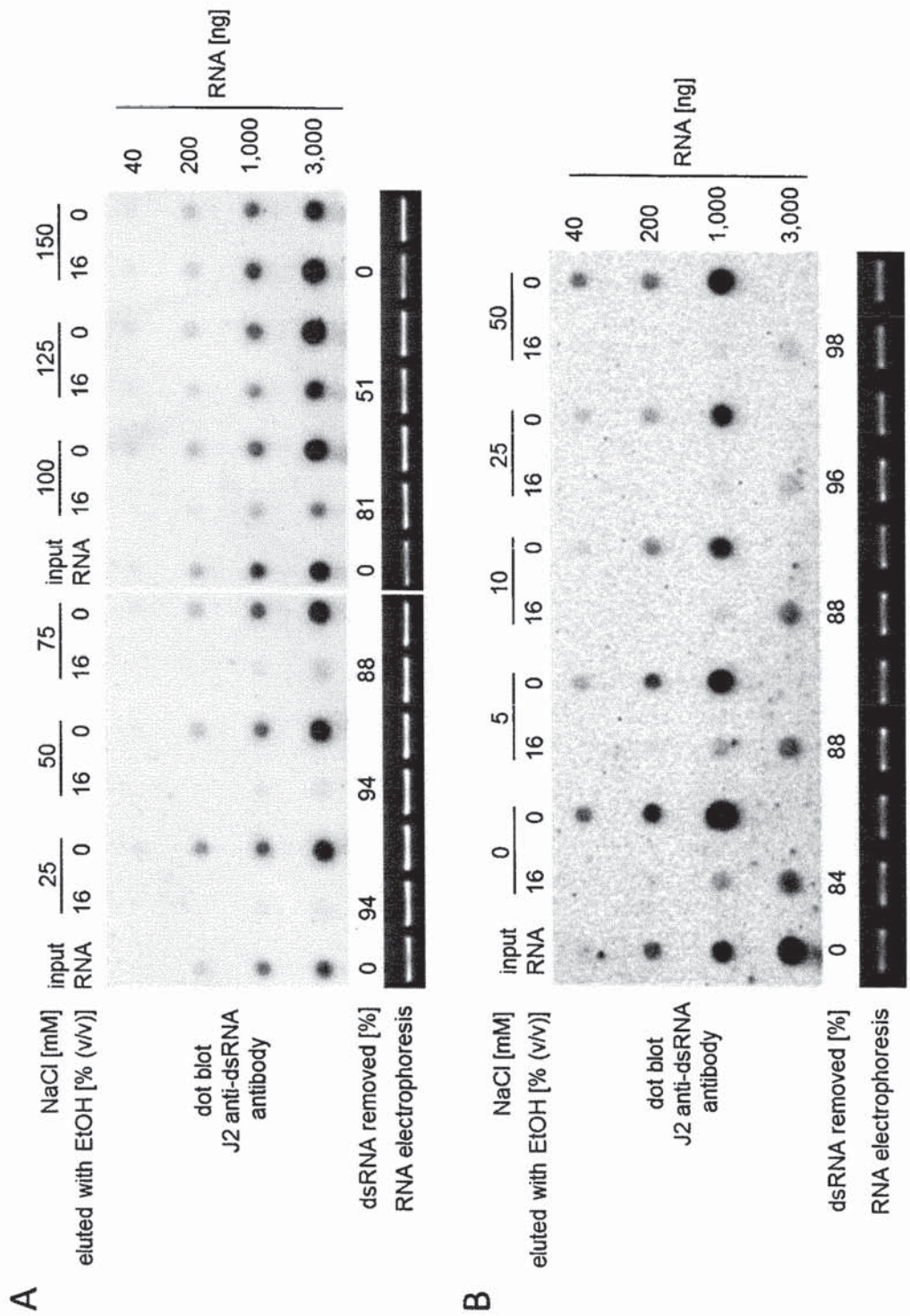

A
NaCl [mM]
eluted with EtOH [% (v/v)]
input RNA
25
16 0
50
16 0
75
16 0
input RNA
100
16 0
125
16 0
150
16 0
RNA [ng]
40
200
1,000
3,000
dot blot
J2 anti-dsRNA antibody
dsRNA removed [%]
0 94 94 88 0 81 51 0
RNA electrophoresis
B
NaCl [mM]
eluted with EtOH [% (v/v)]
input RNA
0
16 0
5
16 0
10
16 0
25
16 0
50
16 0
RNA [ng]
40
200
1,000
3,000
dot blot
J2 anti-dsRNA antibody
dsRNA removed [%]
0 84 88 88 96 98
RNA electrophoresis

Fig. 8

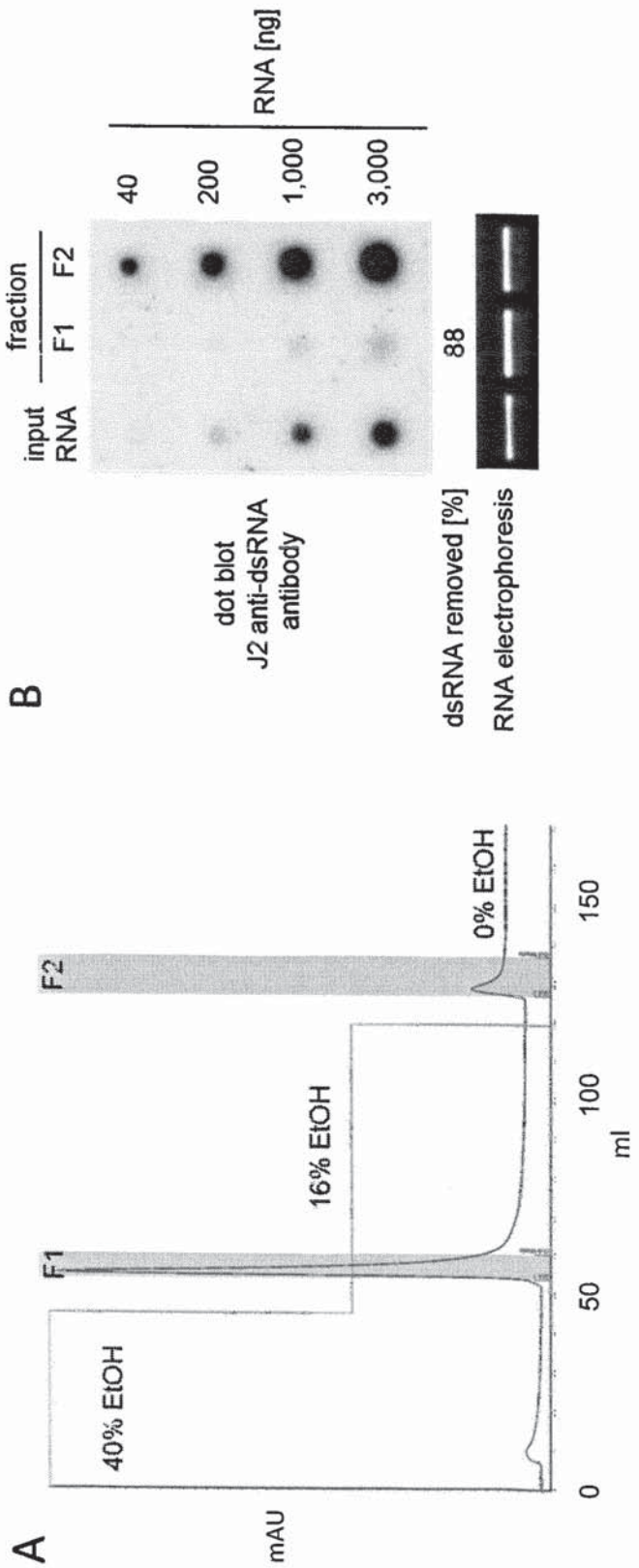

A
mAU
40% EtOH
16% EtOH
0% EtOH
F1
F2
0
50
100
150
ml
B
input RNA
fraction
F1
F2
40
200
1,000
3,000
RNA [ng]
dot blot
J2 anti-dsRNA antibody
88
dsRNA removed [%]
RNA electrophoresis

Fig. 9

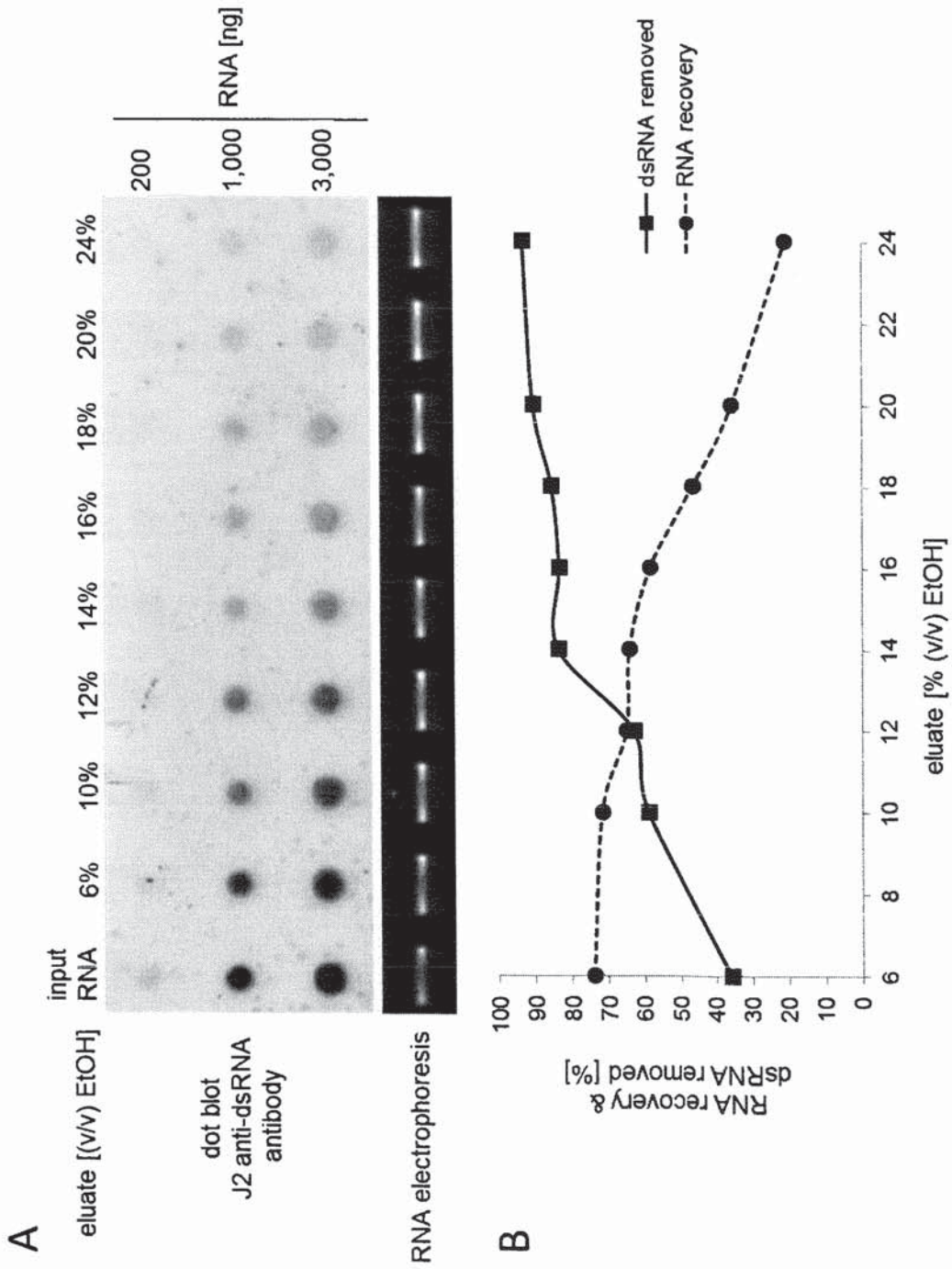

A
input RNA
eluate [(v/v) EtOH]
6%
10%
12%
14%
16%
18%
20%
24%
RNA [ng]
200
1,000
3,000
dot blot
J2 anti-dsRNA antibody
RNA electrophoresis
B
RNA recovery & dsRNA removed [%]
dsRNA removed
RNA recovery
eluate [% (v/v) EtOH]

Fig. 10

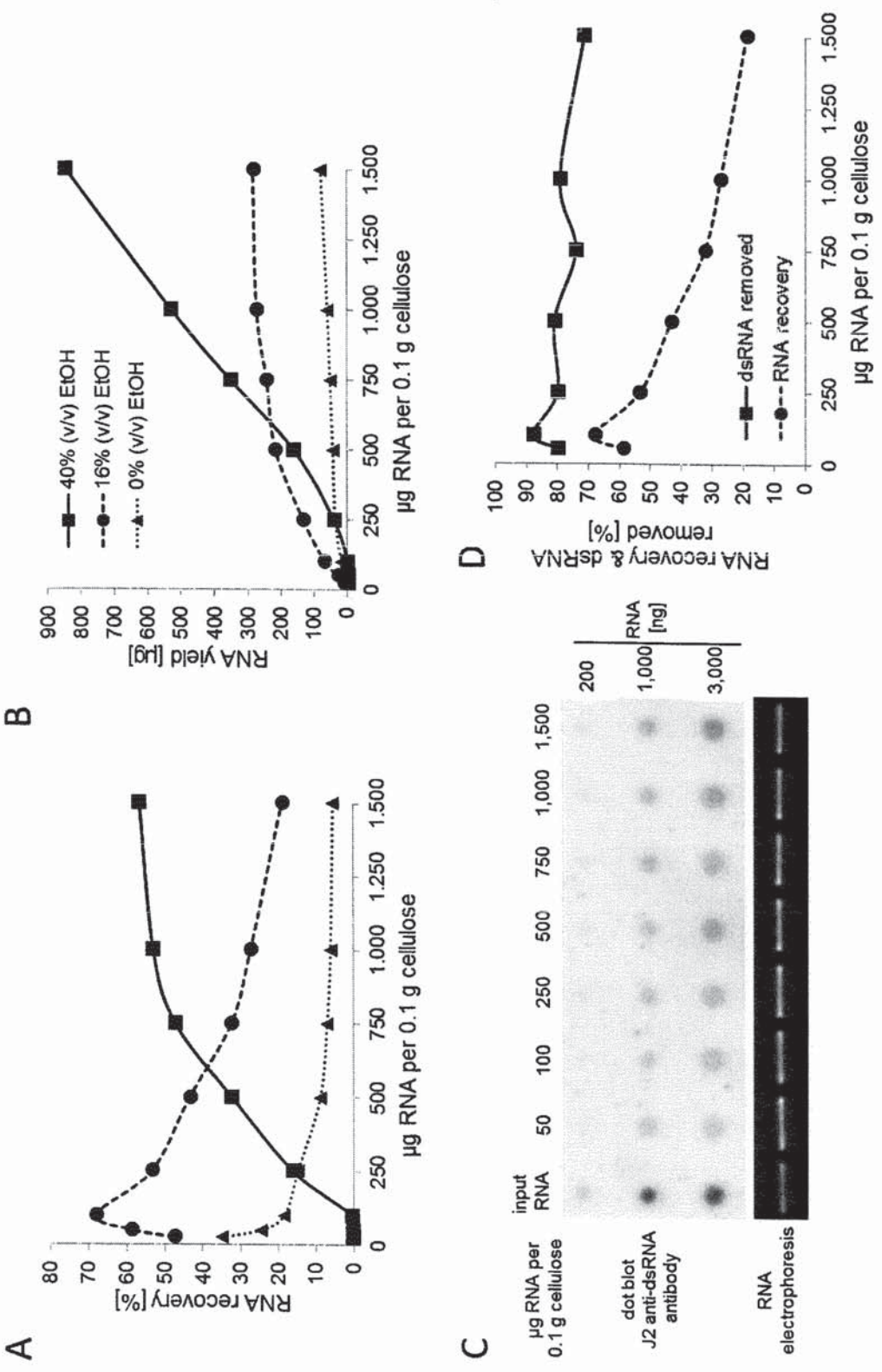
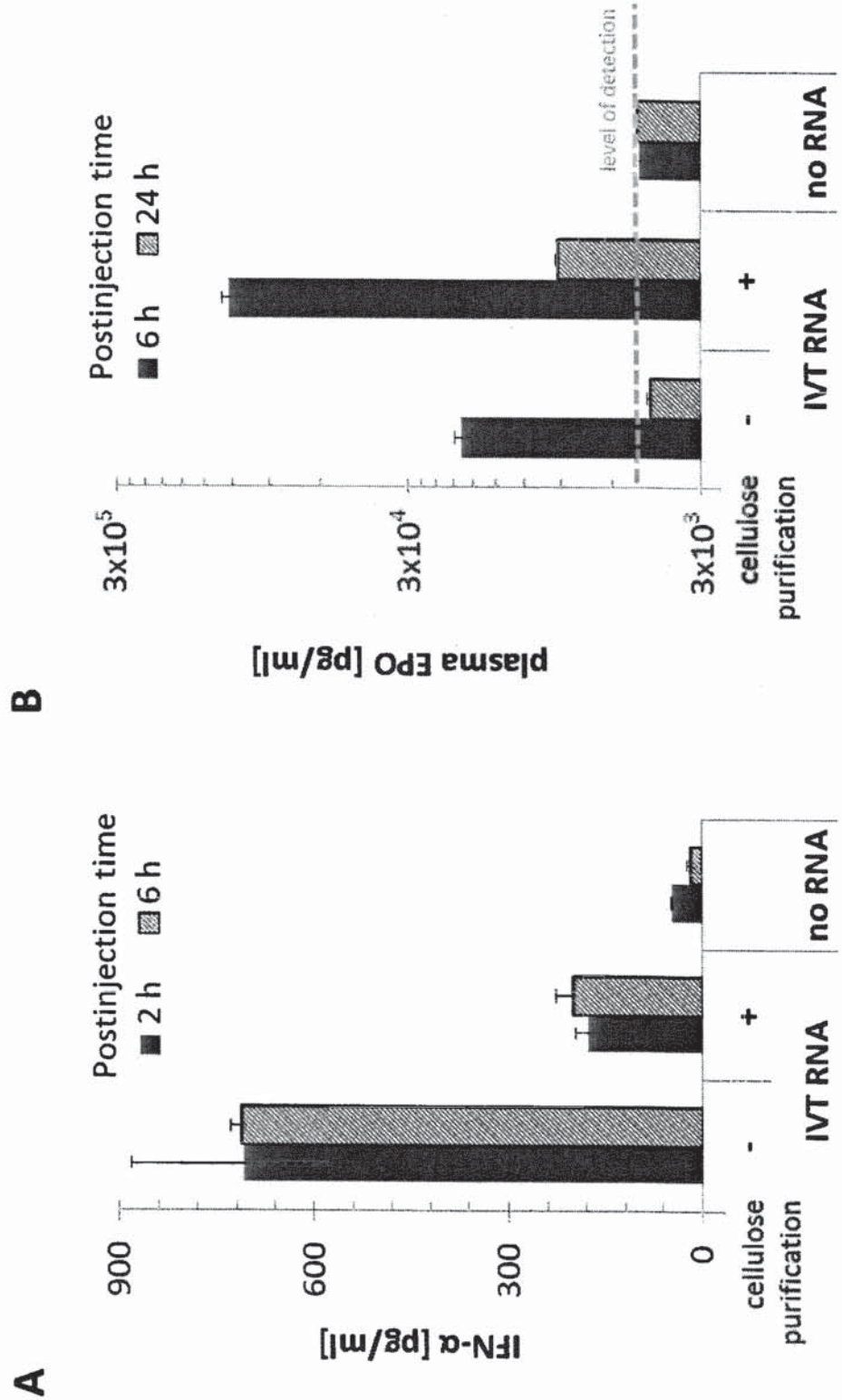

A
RNA recovery [%]
µg RNA per 0.1 g cellulose
B
RNA yield [µg]
40% (v/v) EtOH
16% (v/v) EtOH
0% (v/v) EtOH
µg RNA per 0.1 g cellulose
C
µg RNA per 0.1 g cellulose
input RNA
50
100
250
500
750
1,000
1,500
RNA [ng]
200
1,000
3,000
dot blot J2 anti-dsRNA antibody
RNA electrophoresis
D
RNA recovery & dsRNA removed [%]
dsRNA removed
RNA recovery
µg RNA per 0.1 g cellulose

Fig. 11


A
IFN-α [pg/ml]
900
600
300
0
Postinjection time
2 h
6 h
cellulose purification
-
+
IVT RNA
no RNA
B
plasma EPO [pg/ml]
3x10^5
3x10^4
3x10^3
level of detection
Postinjection time
6 h
24 h
cellulose purification
-
+
IVT RNA
no RNA