Fig. 1

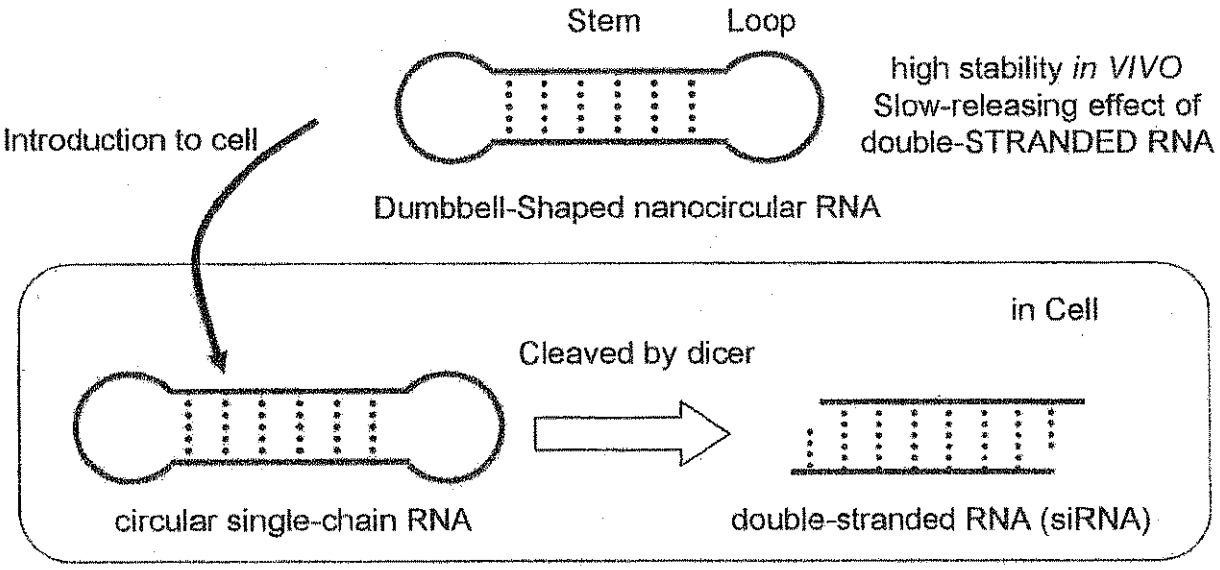
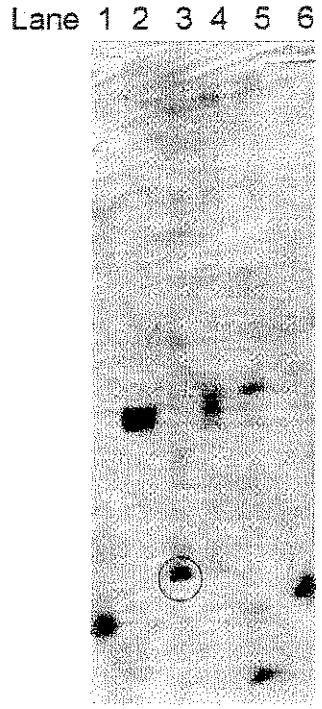

Stem
Loop
high stability *in VIVO*
Slow-releasing effect of
double-STRANDED RNA
Introduction to cell
Dumbbell-Shaped nanocircular RNA
in Cell
Cleaved by dicer
circular single-chain RNA
double-stranded RNA (siRNA)

Fig. 2



56 bases

```
                                                    U  C  A
5′-p-GAG A CUU ACG CUG AGU ACU UCG A U        A
         U GAA UGC GAC UCA UGA AGC U A G  A  G
3′- AACU
```

28 bases (Upper: Sense strand, lower: antisense strand)

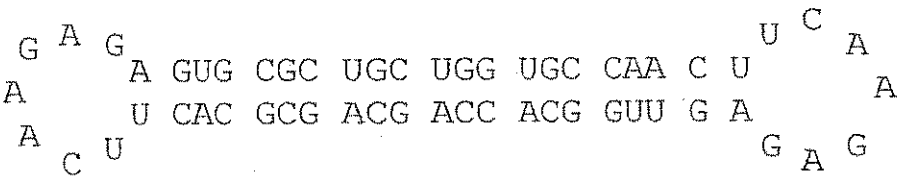
```
                                                   UCAA -3′
5′-p-GAG A CUU ACG CUG AGU ACU UCG A U
         U GAA UGC GAC UCA UGA AGC U A
3′- AACU                                   GAG -p- 5′
```

Fig. 3

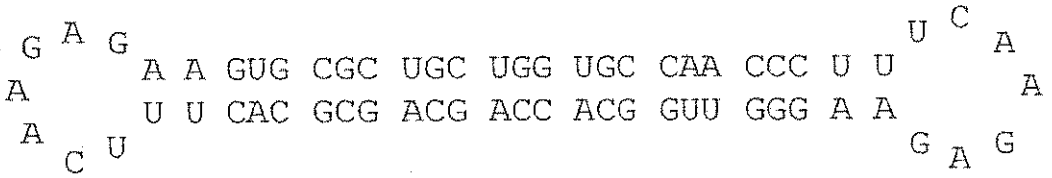
siRNA-1

```
5′- GUG CGC UGC UGG UGC CAA CUU
 UU CAC GCG ACG ACC ACG GUU G -5′
```

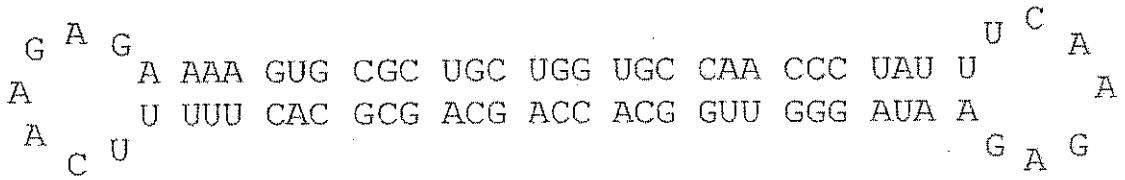
Db-19



Db-23



Db-27



Db-31

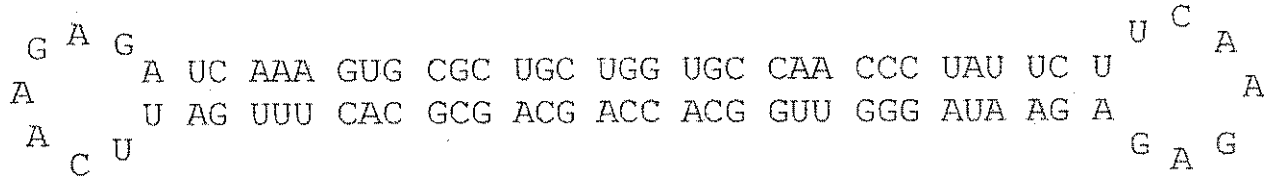


Fig. 4

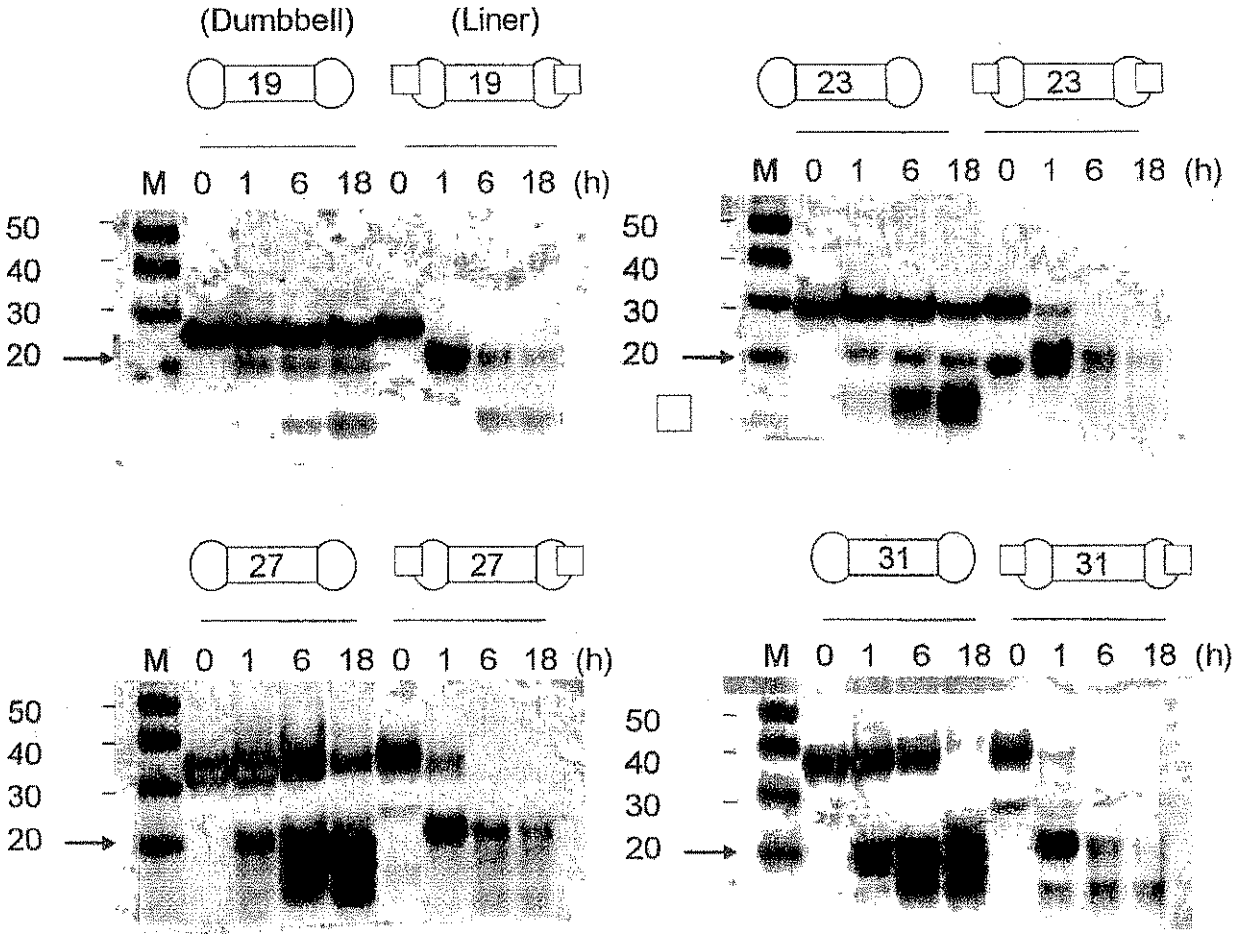


Fig. 5

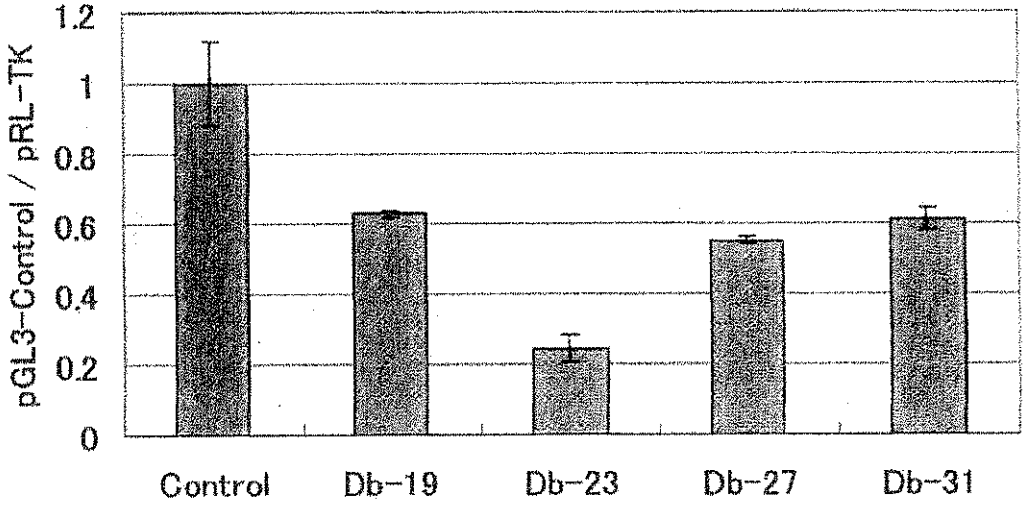

pGL3-Control / pRL-TK
1.2
1
0.8
0.6
0.4
0.2
0
Control
Db-19
Db-23
Db-27
Db-31

Fig. 6

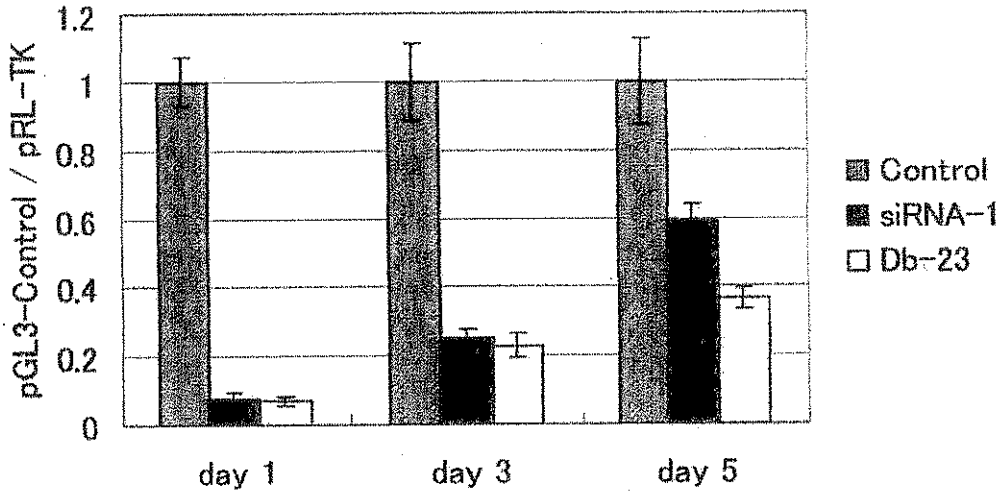
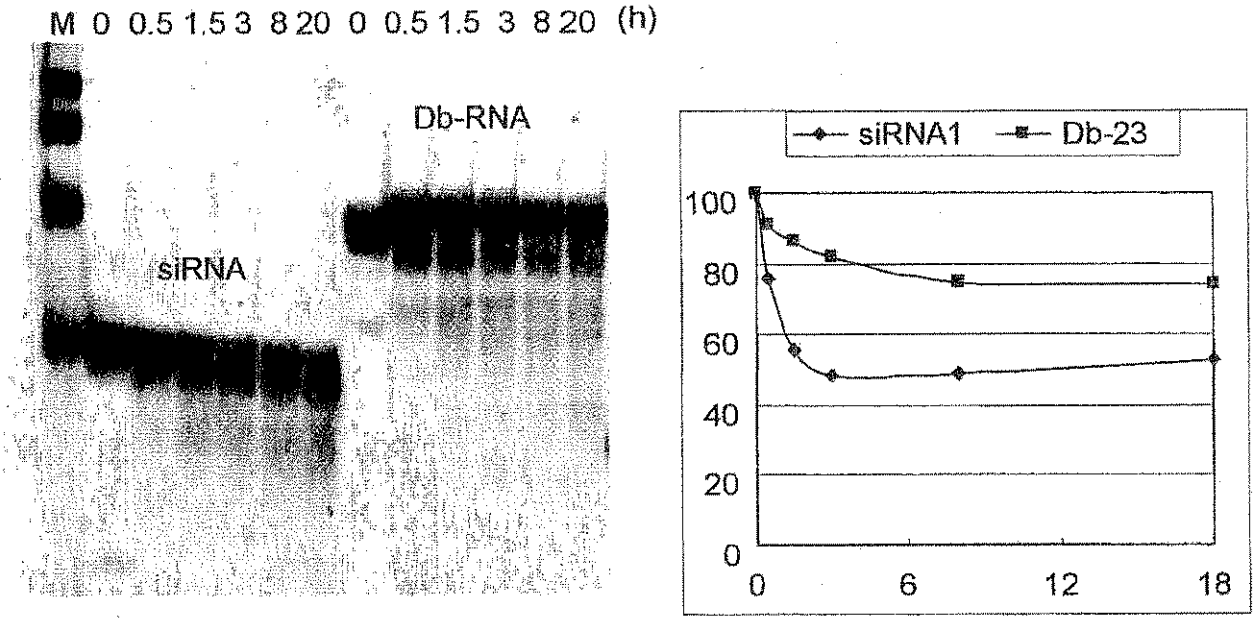

pGL3-Control / pRL-TK
1.2
1
0.8
0.6
0.4
0.2
0
day 1
day 3
day 5
Control
siRNA-1
Db-23

Fig. 7


M 0 0.5 1.5 3 8 20 0 0.5 1.5 3 8 20 (h)
Db-RNA
siRNA
siRNA1
Db-23
100
80
60
40
20
0
0
6
12
18