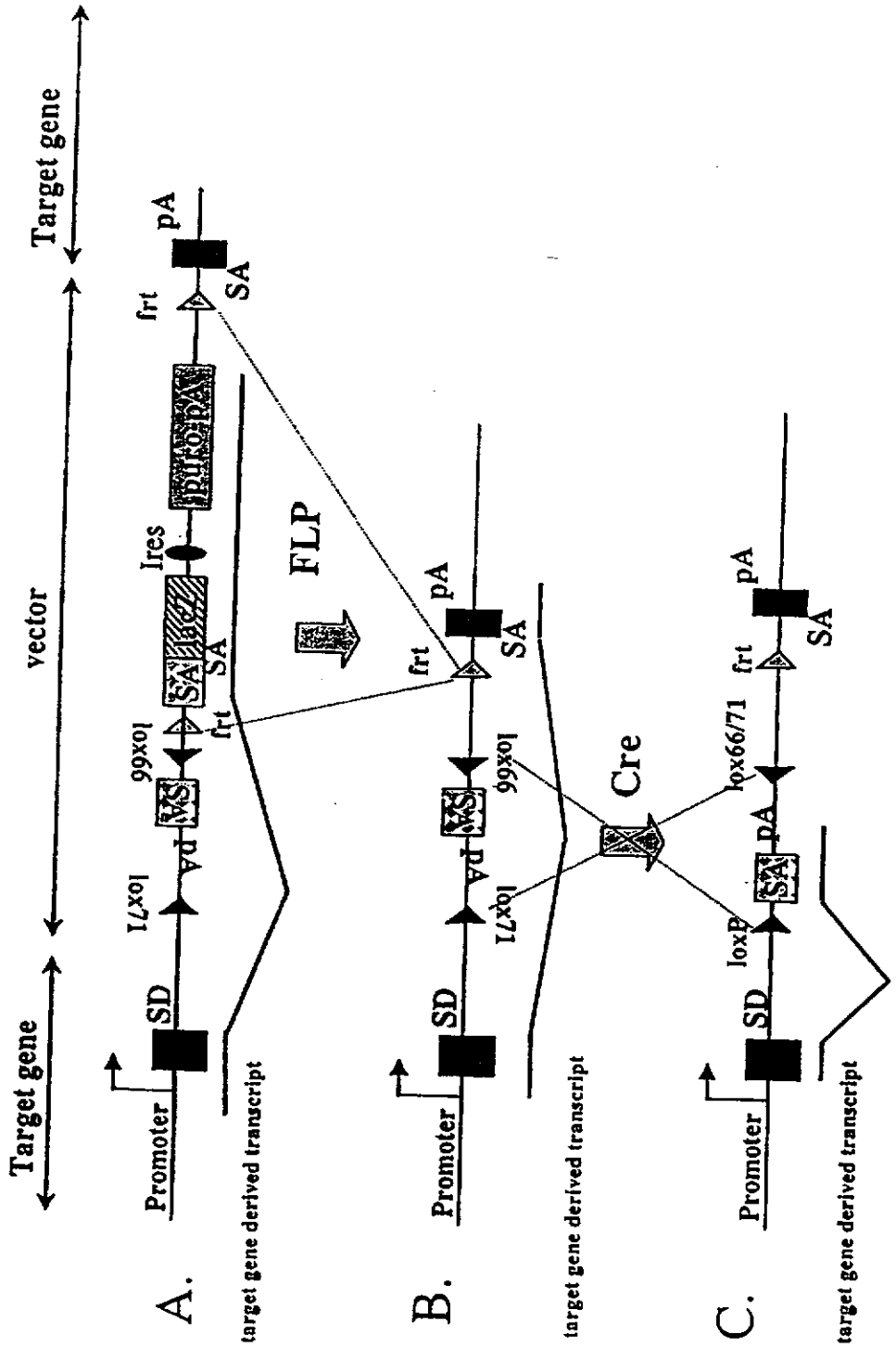
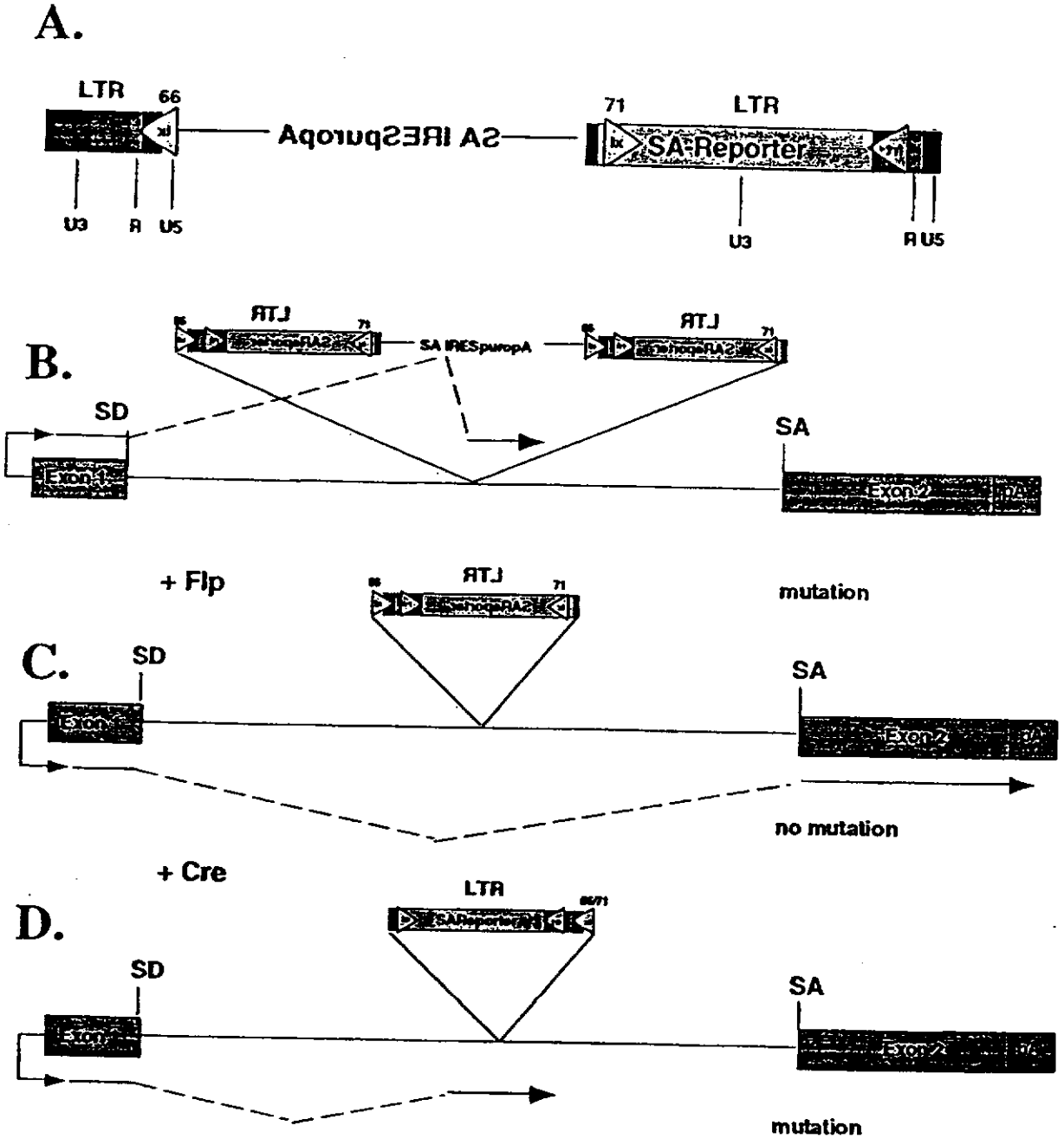

Target gene
vector
Target gene
pA
SA
frt
IRES bGeo pA
Ires
SA
lox66
IVS
pA
lox71
SD
Promoter
A.
target gene derived transcript
FLP
B.
Cre
lox66/71
loxP
C.

Fig. 1

Fig. 2


A.
LTR
66
SA IRESpuropA
71
LTR
SA-Reporter
U3
R
U5
U3
R U5
B.
LTR
SA IRESpuropA
LTR
SD
SA
Exon 1
Exon 2
pA
+ Flp
LTR
mutation
C.
SD
SA
Exon 1
Exon 2
pA
no mutation
+ Cre
LTR
D.
SD
SA
Exon 1
Exon 2
pA
mutation

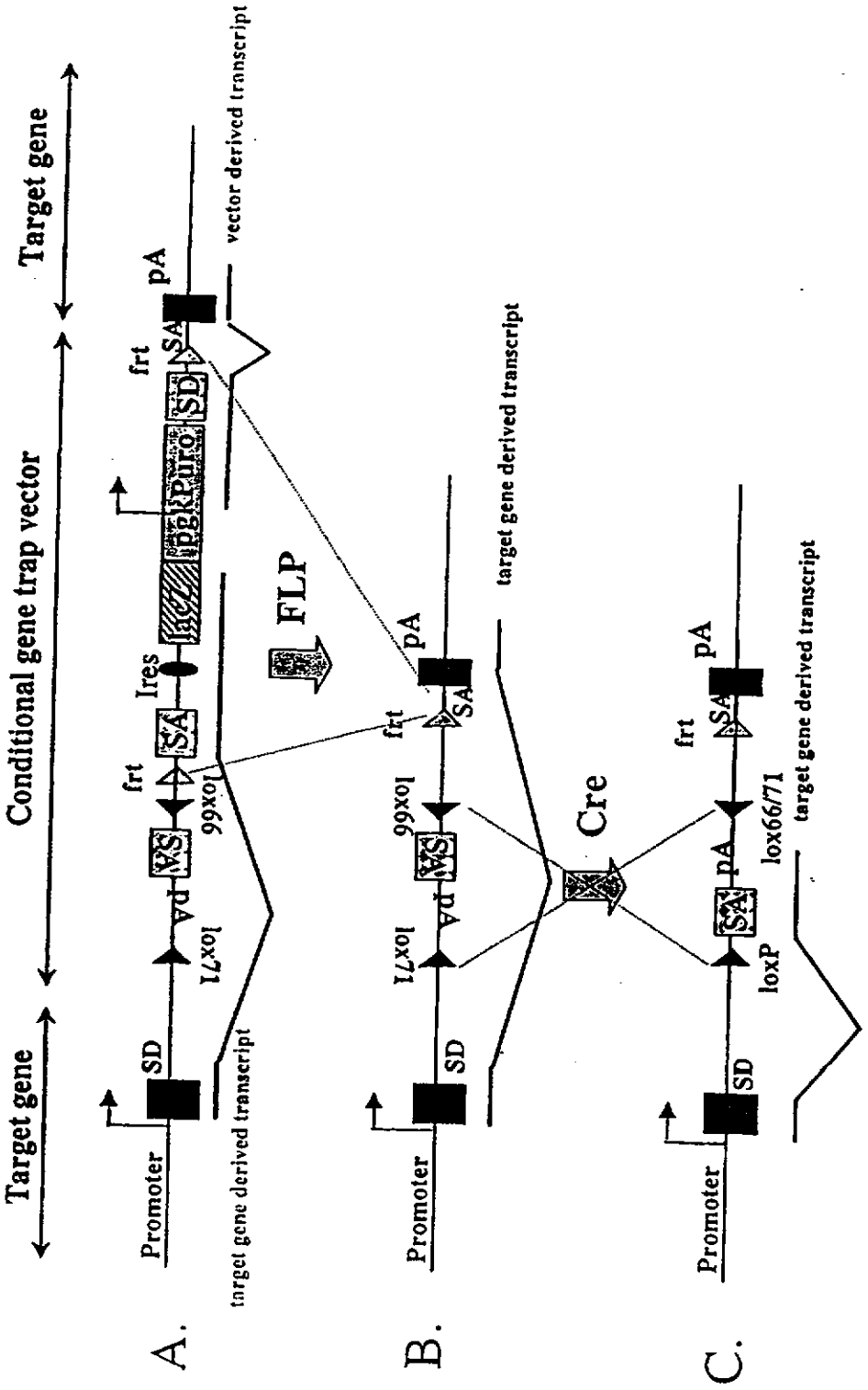
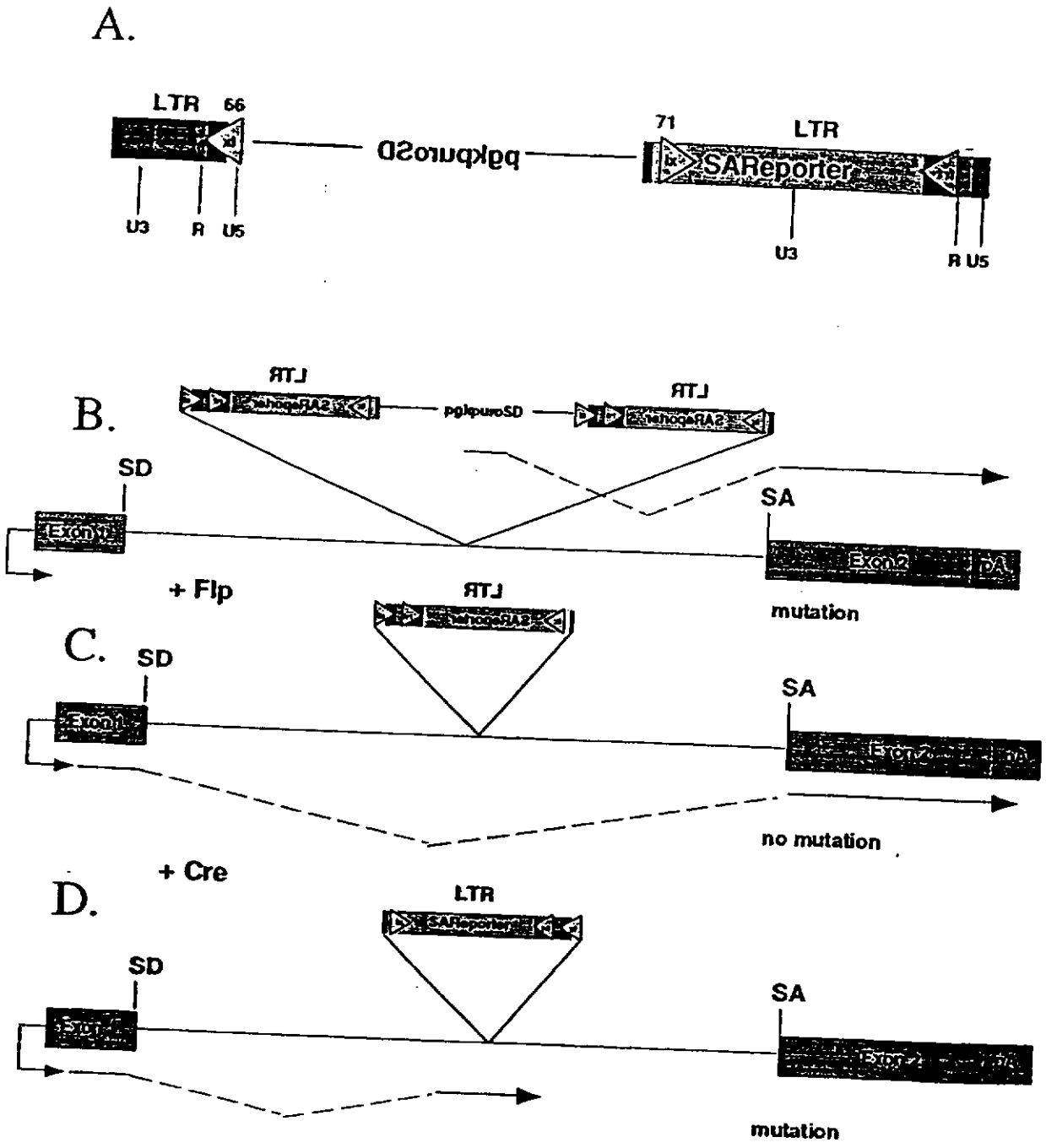

Target gene
Conditional gene trap vector
Target gene
vector derived transcript
pA
frt
SA
SD
pBKPuro
lres
SA
frt
loxP
pA
lox71
SD
Promoter
target gene derived transcript
A.
FLP
pA
target gene derived transcript
SA
frt
lox66
SA
pA
lox71
SD
Promoter
B.
Cre
pA
frt
SA
lox66/71
SA
pA
loxP
SD
Promoter
target gene derived transcript
C.

Fig. 3

Fig. 4


A.
LTR
66
U3
R
U5
71
LTR
SAReporter
U3
R U5
B.
SD
SA
Exon1
Exon2
pA
+ Flp
mutation
C.
SD
SA
no mutation
+ Cre
D.
LTR
SD
SA
mutation

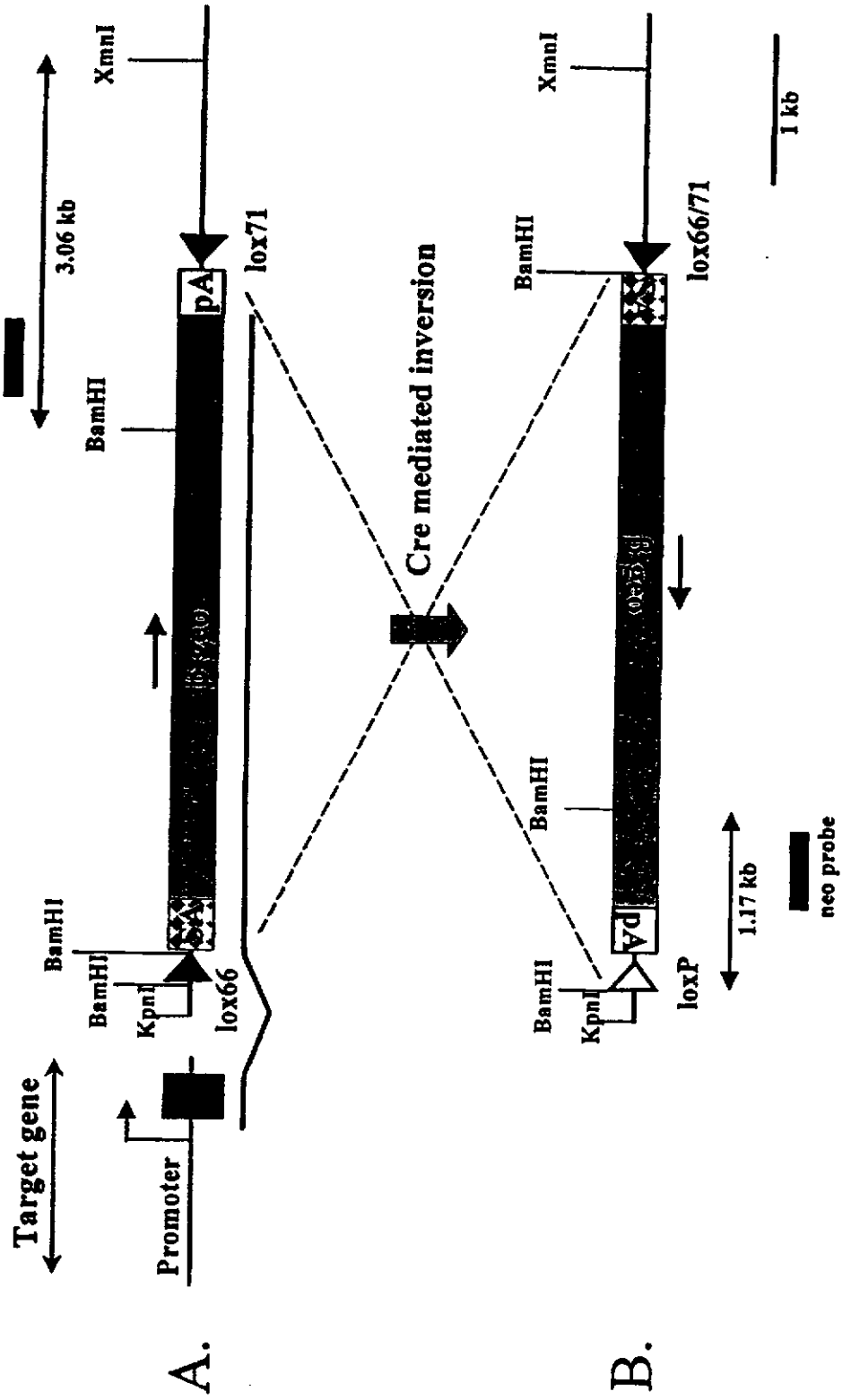
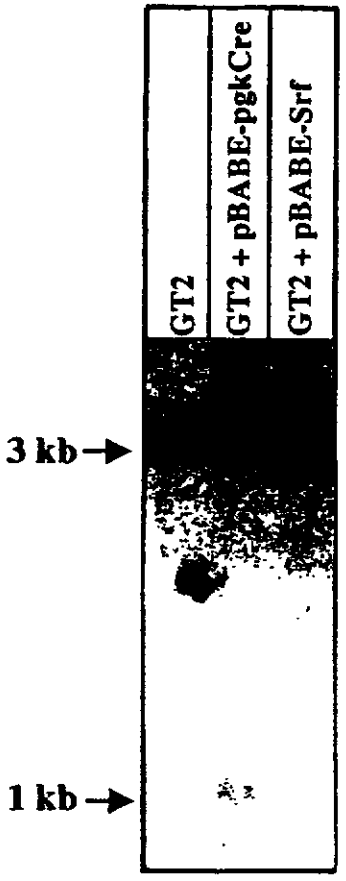

XmnI
3.06 kb
neo probe
BamHI
pA
lox71
Cre mediated inversion
BamHI
KpnI
lox66
Target gene
Promoter
A.
XmnI
1 kb
BamHI
lox66/71
BamHI
pA
1.17 kb
neo probe
BamHI
KpnI
loxP
B.

Fig. 5

Figure 6



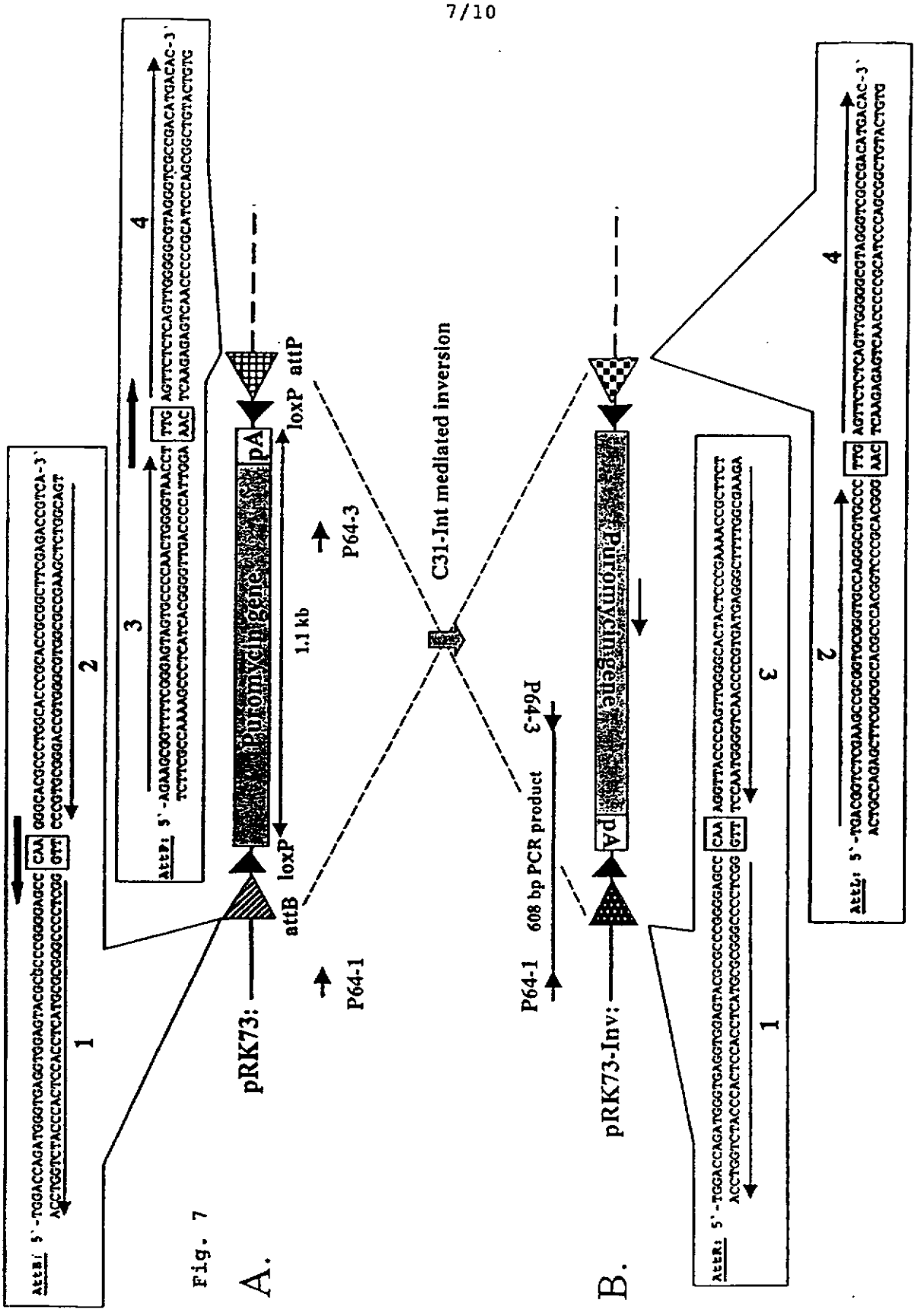

A.
pRK73:
attB
loxP
Puromycin gene
pA
loxP
attP
1.1 kb
P64-3
P64-1
C31-Int mediated inversion
B.
pRK73-Inv:
P64-1
608 bp PCR product
P64-3
Puromycin gene
pA
1
2
3
4

Fig. 7

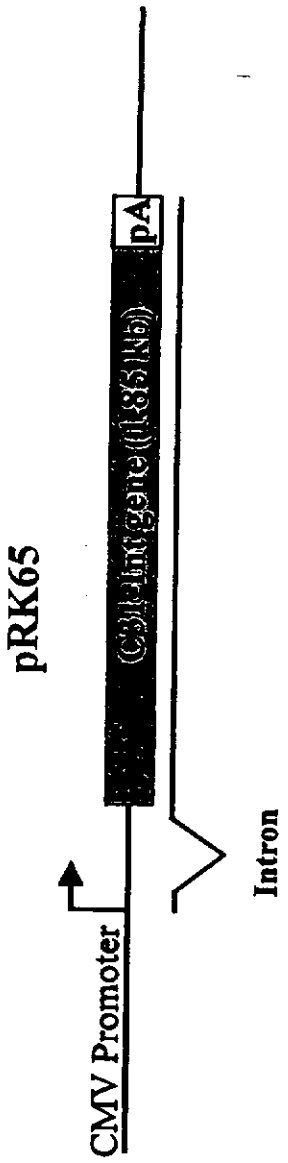


Fig. 8

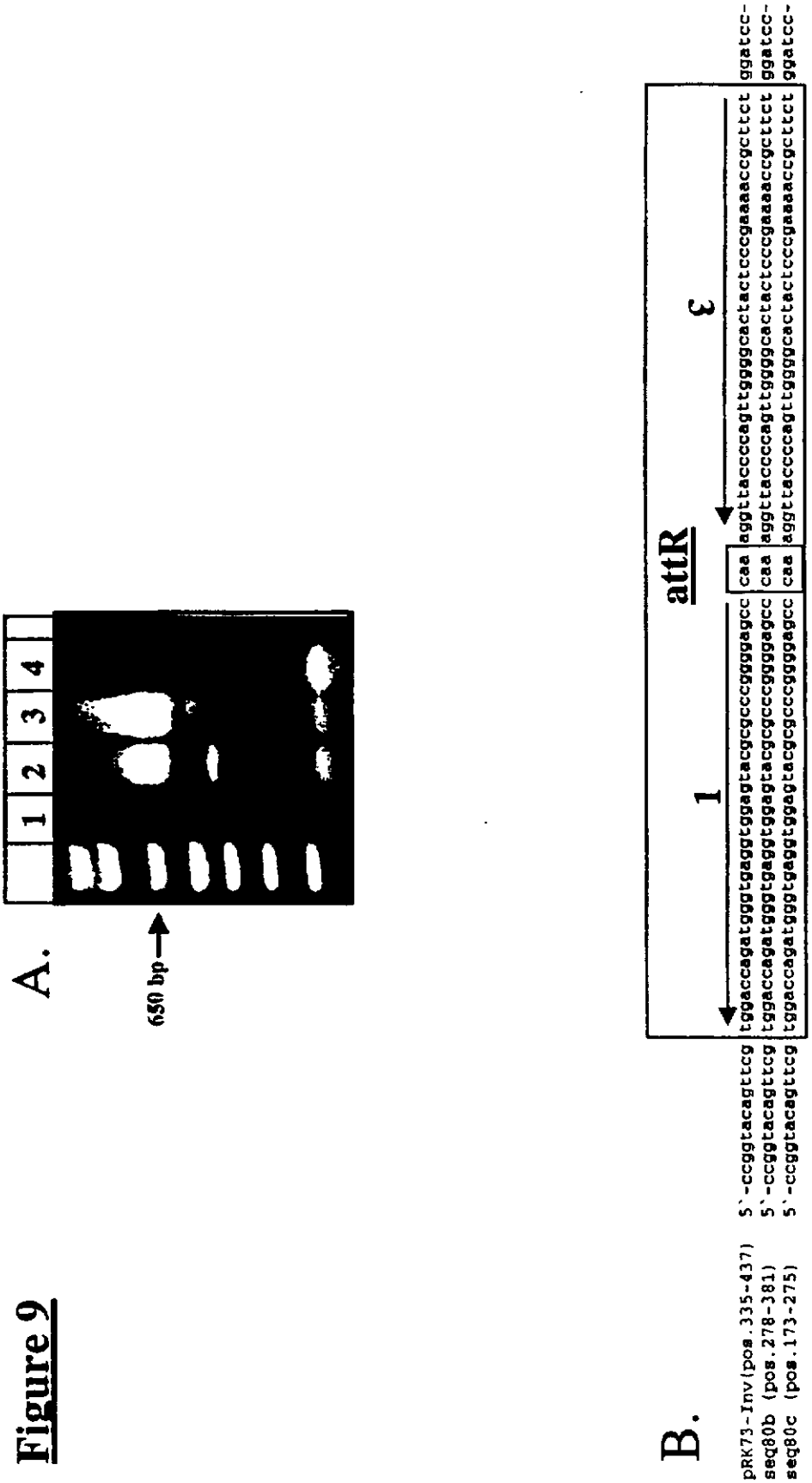

A.
1
2
3
4
650 bp
B.
attR
ε
1
pRK73-Inv(pos.335-437) 5`-ccggtacagttcg tggaccagatgggtgaggtgagtacgcgcccgggagcc caa aggttaccccagttgggcactactcccgaaaaccgcttct ggatcc-
seq80b (pos.278-381) 5`-ccggtacagttcg tggaccagatgggtgaggtgagtacgcgcccgggagcc caa aggttaccccagttgggcactactcccgaaaaccgcttct ggatcc-
seq80c (pos.173-275) 5`-ccggtacagttcg tggaccagatgggtgaggtgagtacgcgcccgggagcc caa aggttaccccagttgggcactactcccgaaaaccgcttct ggatcc-

Figure 9

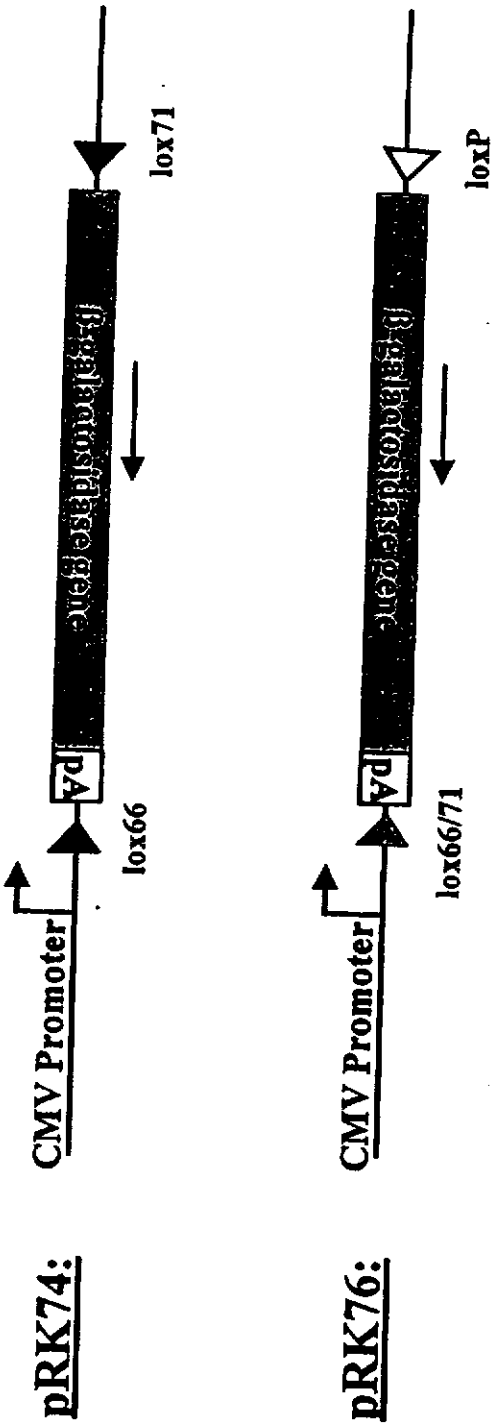

pRK74:
CMV Promoter
lox66
pA
β-galactosidase gene
lox71
pRK76:
CMV Promoter
lox66/71
pA
β-galactosidase gene
loxP

Fig. 10