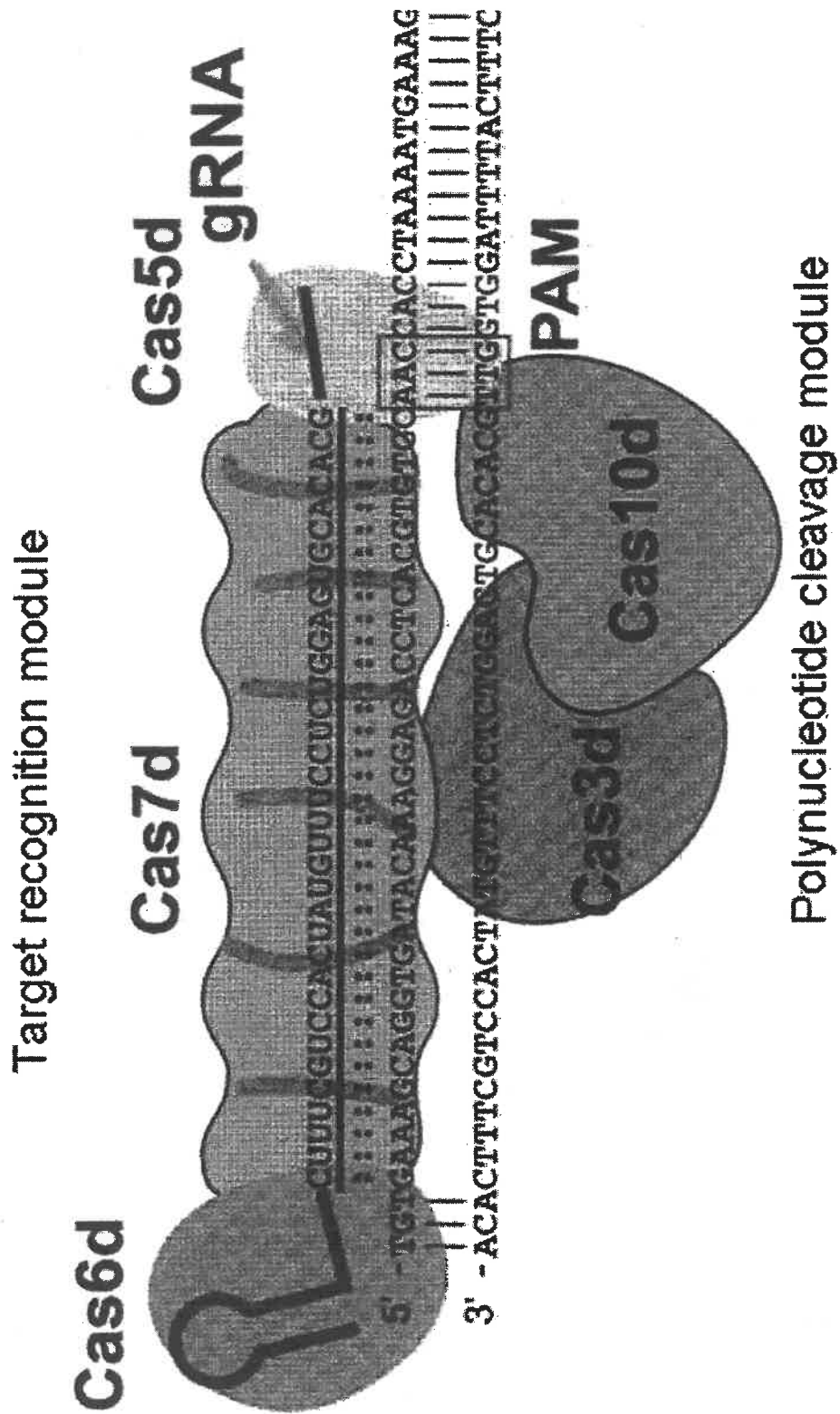
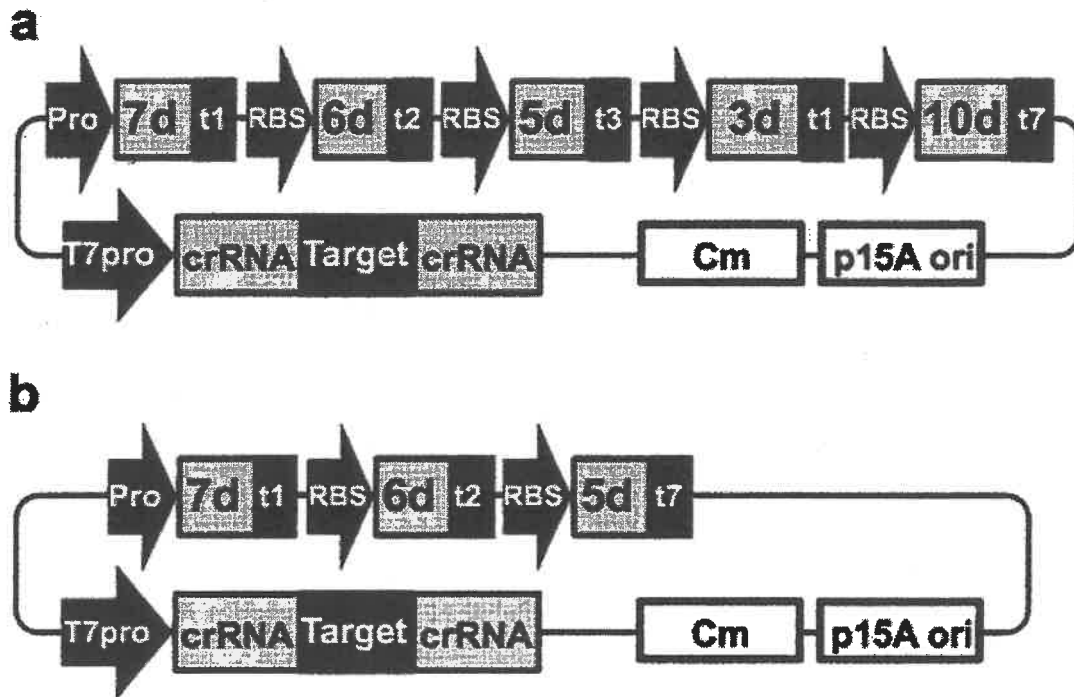


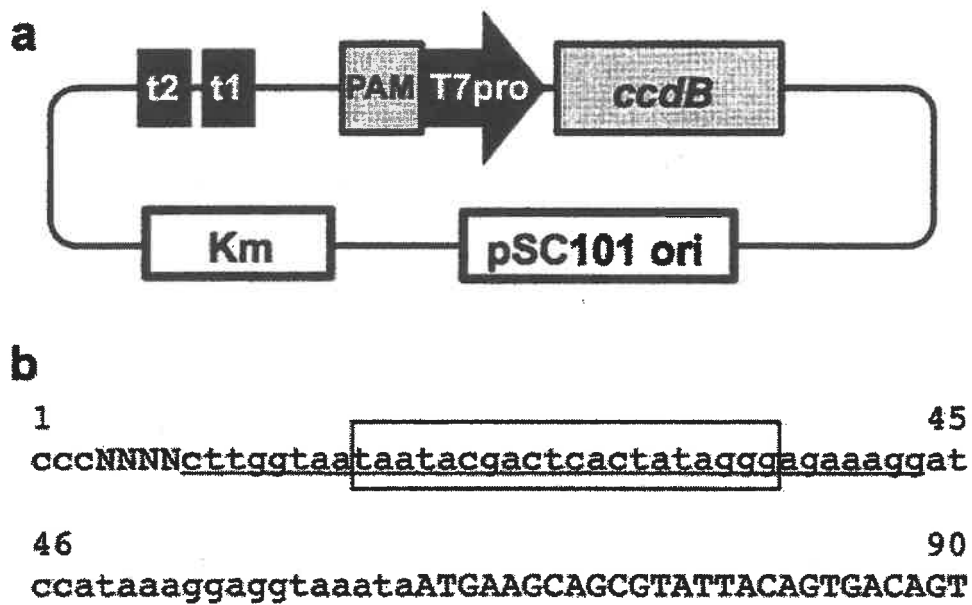
[Fig. 1]



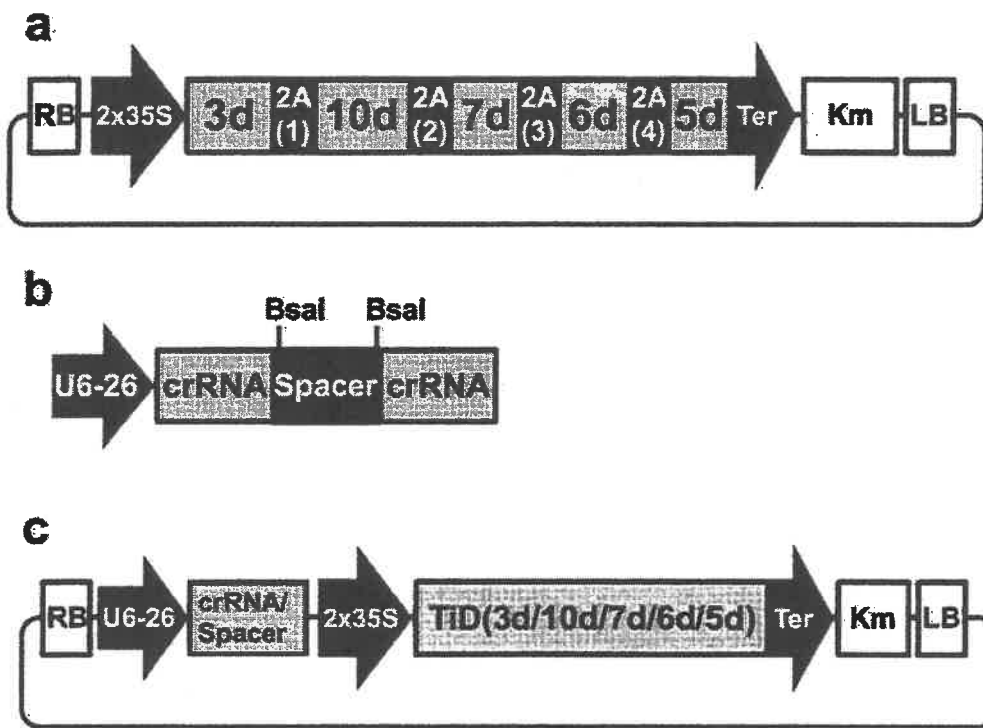
[FIG. 2]



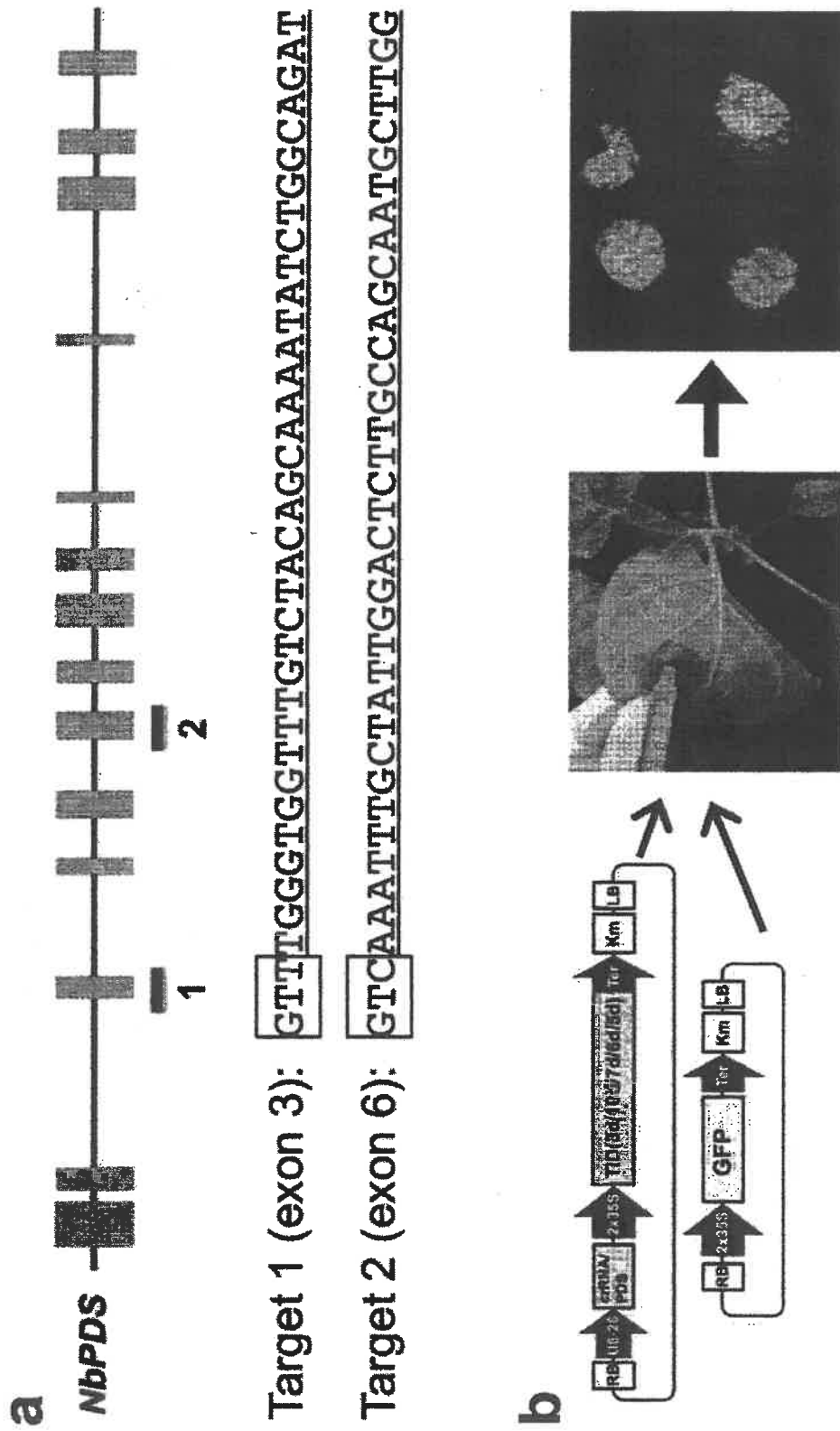
[FIG. 3]



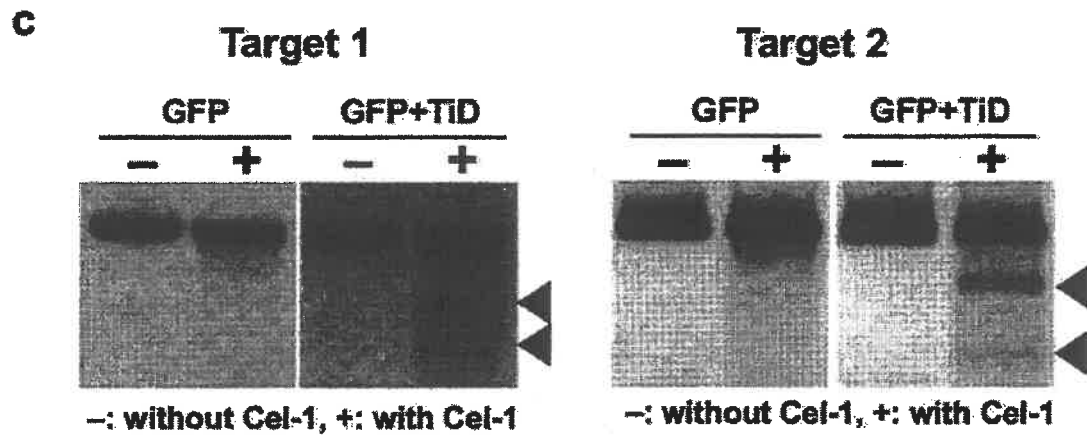
[FIG. 4]



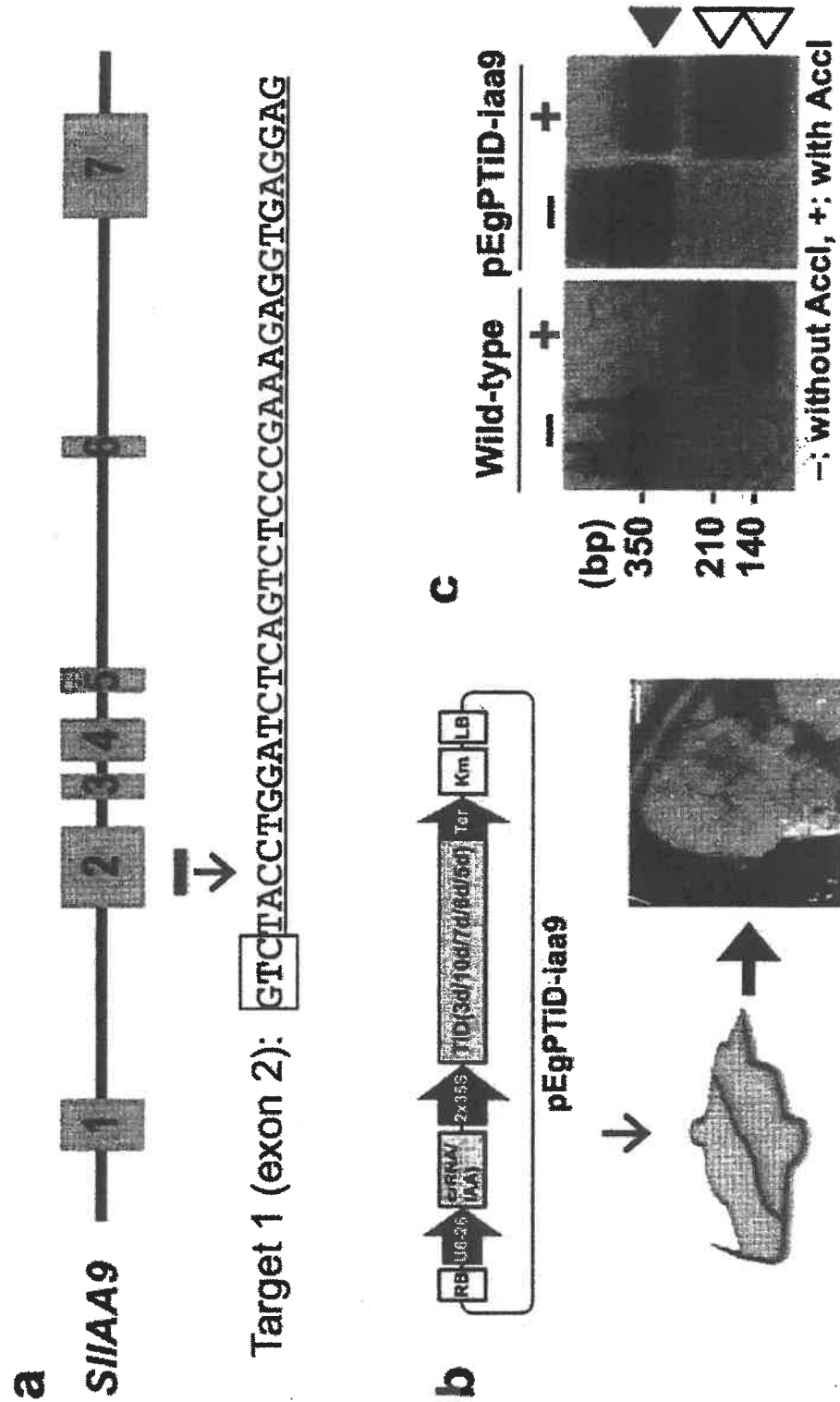
[FIG.5-1]



[FIG. 5-2]



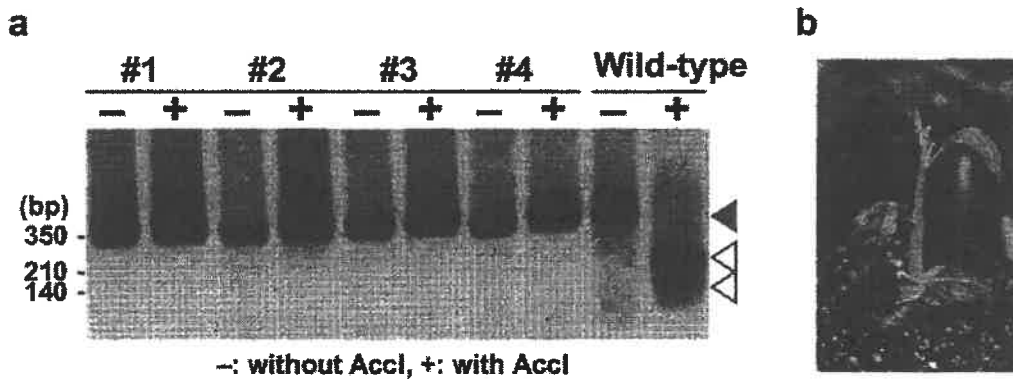
[FIG. 6]



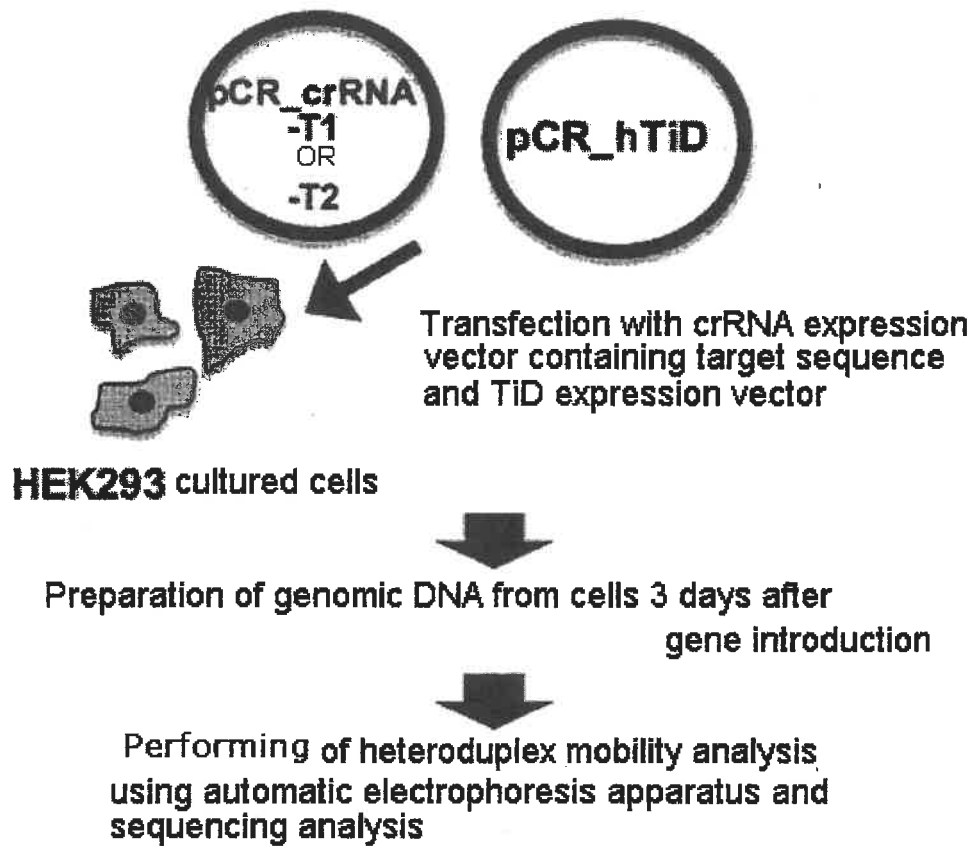
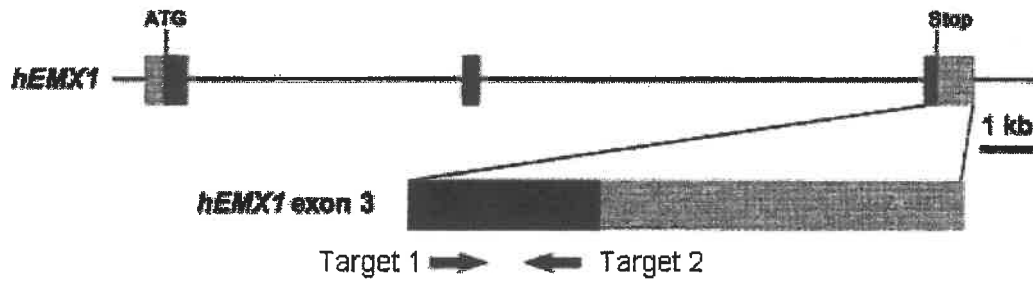
[FIG. 7]



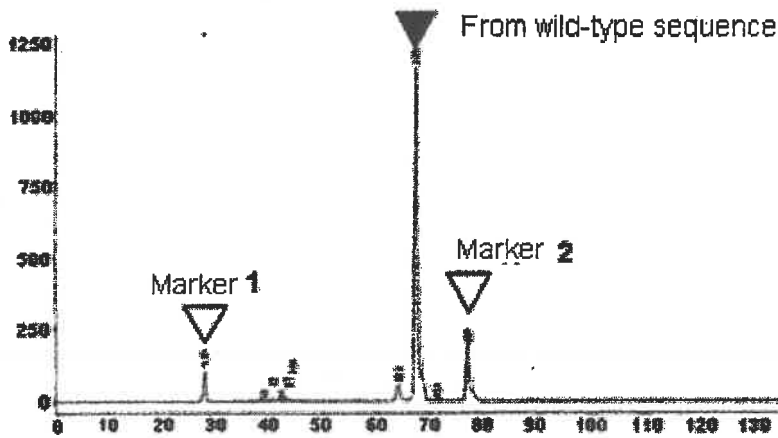
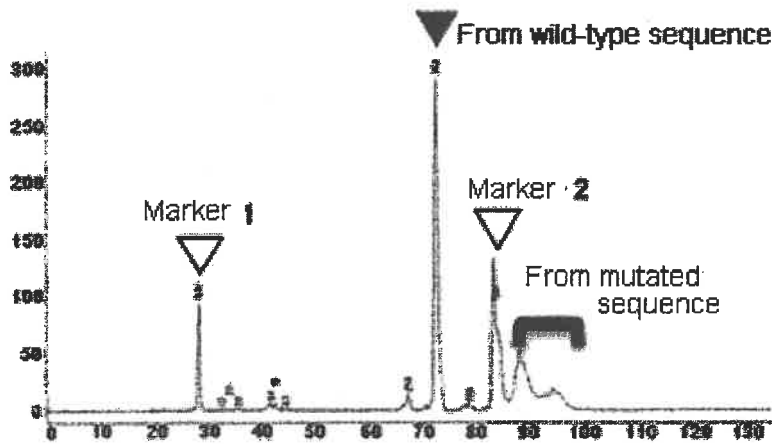
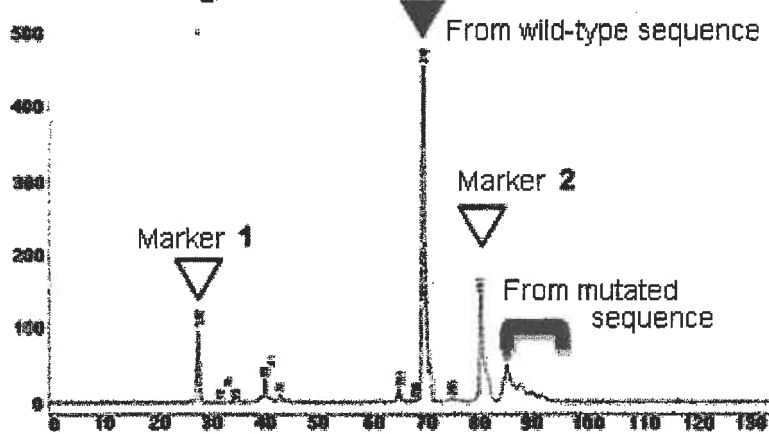
[FIG. 8]



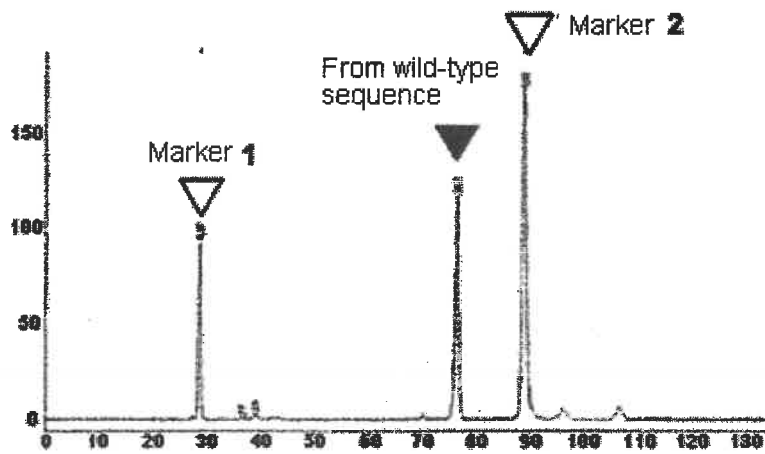
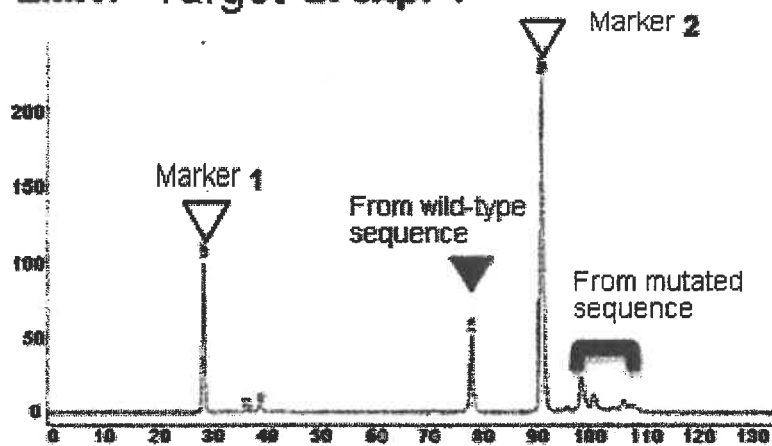
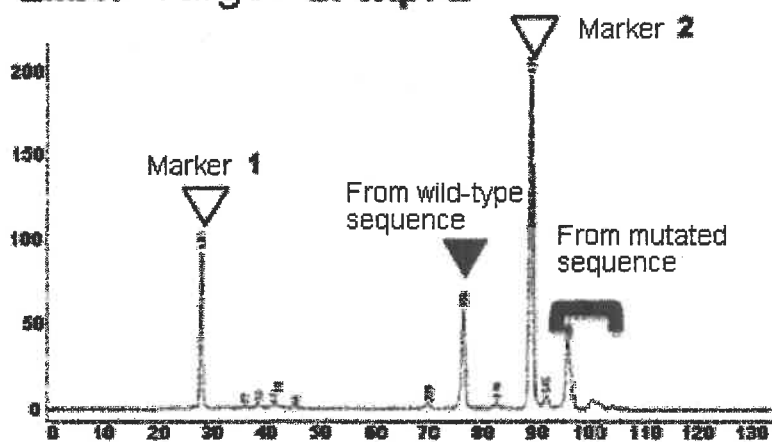
[FIG. 9]



[FIG.10]

EMX1 Target 1: Control**EMX1 Target 1: exp.-1****EMX1 Target 1: exp.-2**

[FIG. 11]

EMX1 Target 2: Control**EMX1 Target 2: exp.-1****EMX1 Target 2: exp.-2**

[FIG. 12]

EMX1 Target 1: exp.-1

PAM Target 1

WT 5'-GGTGTGCTTCCAGAACCGGAGGACAAAGTACAAACGGCAGAGCTGGA-3'

Mut1 5'-GGTGTGCT--CAGAACCGGAGGACAAAGTACAAACGGCAGAGCTGGA-3' (3/46)

Mut2 5'-GGTGTGGTT-CAGAACCGGAGGACAAAGTACAAACGGCAGAGCTGGA-3' (2/46)

Mut3 5'-GGTGTGCT-----AACGGCAGAGCTGGA-3' (1/46)

Mut4 5'-GGTGTGGA-----GGACAAAGTACAAACGGCAGAGCTGGA-3' (1/46)

Mut5 5'-GGTGTG-----AGAACCGGAGGACAAAGTACAAACGGCAGAGCTGGA-3' (1/46)

Mut6 5'-GGTGTGGT-----AACCGGAGGACAAAGTACAAACGGCAGAGCTGGA-3' (1/46)

EMX1 Target 1: exp.-2

PAM Target 1

WT 5'-GGTGTGCTTCCAGAACCGGAGGACAAAGTACAAACGGCAGAGCTGGA-3'

Mut1 5'-GGTGTGGTTC--GAAACCGGAGGACAAAGTACAAACGGCAGAGCTGGA-3' (2/30)

Mut2 5'-GGTGTGGTT-CAGAACCGGAGGACAAAGTACAAACGGCAGAGCTGGA-3' (1/30)

Mut3 5'-GGTGTGGT-----AACGGCAGAGCTGGA-3' (1/30)

Mut4 5'-GGTGTGG-----AACCGGAGGACAAAGTACAAACGGCAGAGCTGGA-3' (1/30)

[FIG. 13]

EMX1 Target 2: exp.-1

Target 2 PAM

WT 5'-CTGAGTCCGAGCAGAAGAAGAAGGGCTCCCATCACAT**AAC**CGGTGGC-3'

Mut1 5'-CTGAGTCCGAGCAGAAGAAGAAGGGCTCCCATCACAT-AACCGGTGGC-3' (1/40)

Mut2 5'-CTGAGTCCGAGCAGAAGAAGAAGGGCTCCCATCACA--AACCGGTGGC-3' (1/40)

Mut3 5'-CTGAGTCCGAGCAGAAGAAGAAGGGCTCC-----ACCGGTGGC-3' (1/40)

Mut4 5'-CTGAGTCCGAGCAGAAGAAGAAGGGCTCCCATCACAT--CCGGTGGC-3' (1/40)

Mut5 5'-CTGAGTCCGAGCAGAAGAAGAAGGGCTCCCATCACA---ttCGGTGGC-3' (1/40)

EMX1 Target 2: exp.-2

Target 2 PAM

WT 5'-CTGAGTCCGAGCAGAAGAAGAAGGGCTCCCATCACAT**AAC**CGGTGGC-3'

Mut1 5'-CTGAGTCCGAGCAGAAGAAGAAGGGCTCCCATCACAT-AACCGGTGGC-3' (1/36)

Mut2 5'-CTGAGTCCGAGCAGAAGAAGAAGGGCTCCCATCAC--AACCGGTGGC-3' (1/36)

Mut3 5'-CTGAGTCCGAGCAGAAGA-----ACCGGTGGC-3' (1/36)

agcgggactccgaaggaggagacgagctcatccctcgggccttacttgcagctcgca