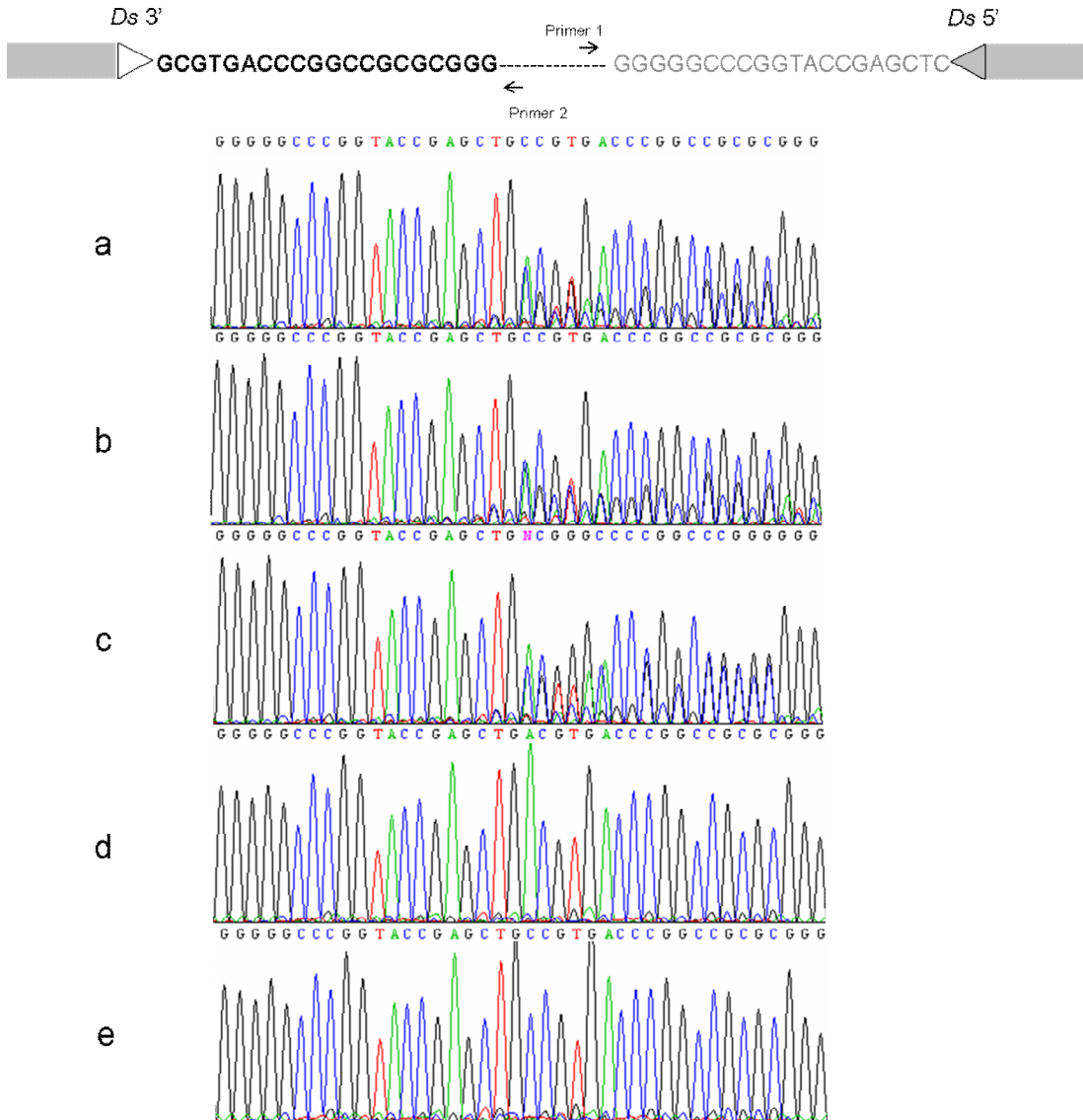


## Supplementary Figure 1

### Sequences of *Ds* 3' and 5' junctions in putative excised circles.

Top diagram shows the 20 bp sequence of the Inter Transposon Segment (ITS) flanking the reversed *Ds* 5' and 3' ends. The products were obtained by PCR amplification of transgenic genomic DNA using primer 1 and primer 2. Sequence traces show the results of sequencing using primer 1. Samples a, b and c exhibit considerable sequence heterogeneity downstream of the footprint site; whereas samples c and d give clear sequences. Lower lines show the sequences of samples c and d; the transposition footprint is shown in small letters.



### Transposition footprints

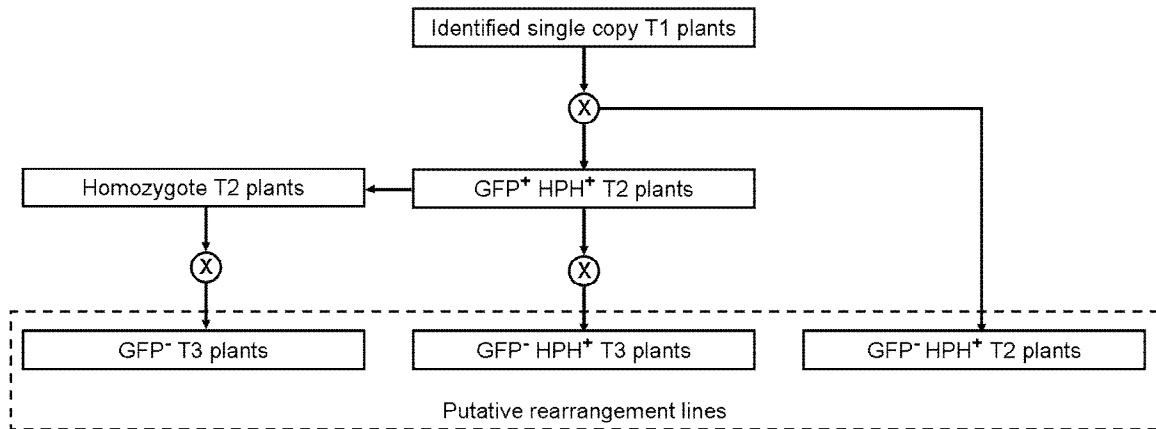
d GGGGGCCCGGTACCGAGCTg**a**C**G**TGACCCGGCCGCGCGGG

e GGGGGCCCGGTACCGAGCTg**c**C**c**G**T**GACCCGGCCGCGCGGG

## Supplementary Figure 2

### Screening and selection procedure for rice rearrangement lines.

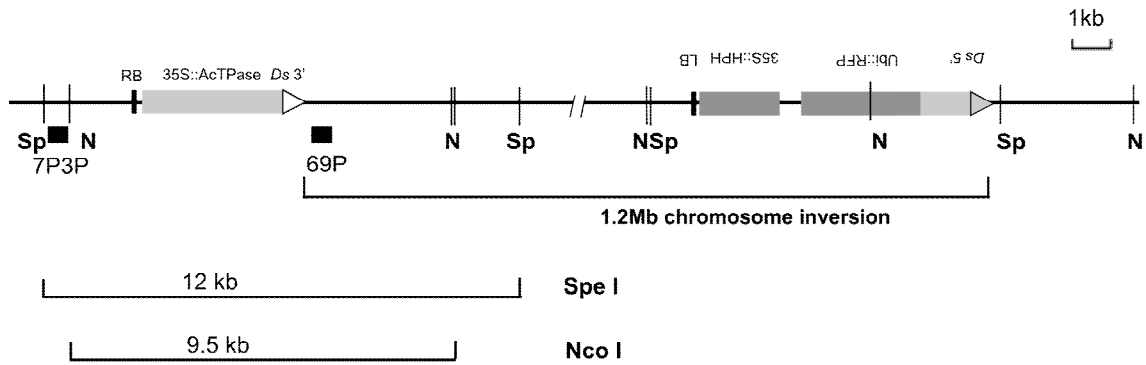
Single copy T1 plant lines were identified by Southern blot. The homozygote T2 plants were identified by PCR analysis with flanking T-DNA insertion site primers. Seeds harvested from T1 or T2 plants were germinated and screened by GFP or Hygromycin resistance to verify presence of the transgene. T2 plants homozygous for the transgene insertion were identified by PCR analysis using flanking T-DNA primers. The ⊗ symbol indicates self-pollination.



### Supplementary Figure 3

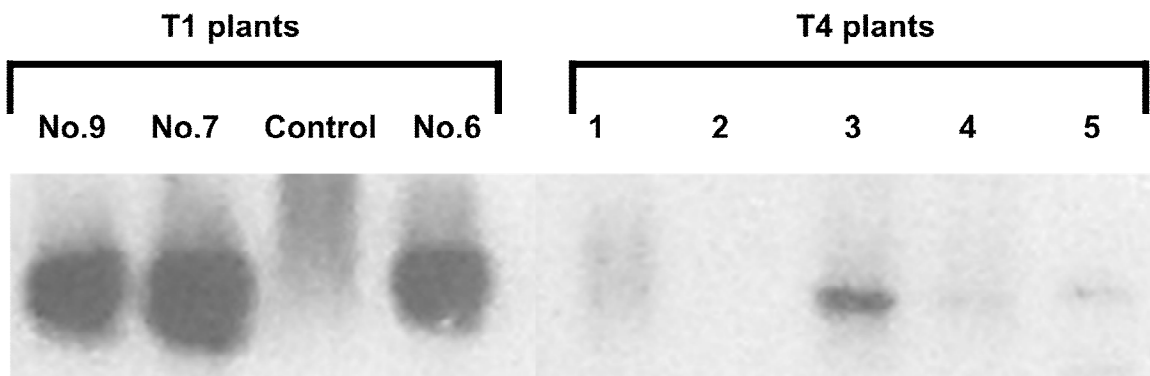
#### Detailed structure of M7-2 allele.

The symbols for restriction map and probe are the same as shown in Figures 1 and 4.



## Supplementary Figure 4

Alternative transposition frequency declines from T1 to T4 generation plants. The panel shows the results of PCR-based detection of excised circle junctions in genomic DNA from T1 and T4 generation plants. PCR was performed using primers 1 and 2 as shown in Supplementary Figure 1. T1 plants No. 6, 7 and 9 gave strong bands, indicating frequent somatic alternative transposition events. Control lane contains genomic DNA from a GFP-negative plant which lacks the intact transgene structure and does not amplify a circle junction fragment. The five T4 plants shown here are progeny derived from T1 plant No. 7. T4 plants 1 and 2 are negative; T4 plants 3, 4 and 5 gave weak bands.



## Supplementary dataset 1. Oligonucleotide DNA primers

For detection of putative somatic excision circles:

Primer1: 5'-CTGGAGTTCGTGACCGCC-3'.

Primer2: 5'-AGAGAGGGGCACGACCG-3'.

For preparation of Southern blot hybridization probes:

7P3P probe: 5'-GCAACCGTTGTCATGTTCCCT-3' and 5'-CGATGGGGAGGTCAGGGG-3'.

69P probe: 5'-GCAGGTGTGGCAATGGCA-3' and 5'-TCGGTCAGTCAGTCGGTGGA-3'.

UBIP probe: 5'-CGACGAGTCTAACGGACACC-3' and 5'-CGTATGAAGGCAGGGCTAAA-3'.

M9-3P probe: 5'-GGCGGCGGCGGCGACG-3' and 5'-CGTCGCCGCCGCCGCC-3'.

For diagnostic PCR assays:

Ar: 5'-GGTTGTGGCTGTGGTTGTGGTTCTGGTT-3'.

Af: 5'-AGATAGTGGAAAAGGAAGGTGGC-3'.

Bf: 5'-CTGGAGTTCGTGACCGCC-3'.

Br: 5'-CCCGTTTCCGTTCCGTTTTTCGT-3'.

Cf: 5'-GCGAAGAATCTCGTGCTTTC-3'.

Cr: 5'-CTGGGAAGTACTCACACATTATTATGG-3'.

For isolation of T-DNA insertion sites or rearrangement breakpoint sequences:

LB1: 5'-GCATATAAGAAACCCTTAGTATGTATTTGT-3'.

LB2: 5'-TCAACACATGAGCGAAACCCT-3'.

LB3: 5'-GTACTAAAATCCAGATCCCCCG-3'.

LB4: 5'-CTGGGAAGTACTCACACATTATTATGG-3'.

RB1: 5'-TGGCGAAAGGGGGATGTG-3'.

RB2: 5'-TGTCGTTTCCCGCCTTCAGT-3'.

RB3: 5'-CGCCAGGGTTTTCCAGTCAC-3'.

RB4: 5'-ACCCGCCAATATATCCTGTCAAAC-3'.

Ds5'f: 5'-TTCCCGACCGTTTCACCG-3'.

Ds5'r1: 5'-GCTCTACCGTTTCCGTTTCCGTTTACCG-3'.

Ds5'r2: 5'-CCCGTTTCCGTTCCGTTTTTCGT-3'.

Ds3'r: 5'-TTGCGGGACGGAAACGAAACGGGATA-3'.

Ds3'f1: 5'-ATGAAAATGAAAACGGTAGAGG-3'.

Ds3'f2: 5'-GTAGATGTATTTTACCGACCGTTA-3'.

For preparation of FISH probes:

9D-3.7kb: 5'-ATCGTCATCATTCTTCCTCCCAT-3' and 5'-GCTTCTTGTCTCCGTGTCCCG-3';

5'-CTCGTCTCCTCCTCCGCCA-3' and 5'-CCCAGATAATGAGACCCACCACT-3';

9D-3.8kb: 5'-GTAGAGGAGAGGATAAATGTTGTGGTG-3' and 5'-TGAGGGAAGGGGGAAGGGAC-3';

5'-GTCCCTTCCCCCTTCCCTCA-3' and 5'-  
CCCTACTCGTCCAAGGTATCTCTACTCT-3'.

9F-4.7kb: 5'-CGTTTTACCCCCTACTCAATGG-3' and 5'-  
TTTTGTCCGCTTCCCTTTTTTC-3';

5'-GAAAAAAGGGAAGCGGACAAAA-3' and 5'-  
TAGCATAACAAAAGAAAAGGGTGGT-3';

9F-3.3kb: 5'-CTGTGGCAGGGTAGTGATGATTTAG-3' and 5'-  
TTTTGGGAGAATAAGGGGAGATAGG-3';

5'-GGTGGCAGTGGAGTCTTGGTGA-3' and 5'-GCAGGAGAGCGAGGGGC-3'.

### Supplementary dataset 2. Cloned breakpoint sequences.

Yellow highlighted sequences indicate target site duplications (TSD) detected by sequencing both 5' and 3' *Ds* insertion junctions. For deletions only one *Ds* 5' or 3' end sequence is present; the underlined bases indicate the terminal nucleotide of the *Ds* 5' (beginning of the sequence) or 3' (end of the sequence) ends.

M6-1

TTGAAAATACAAACAAAAAAGGGGACGAATTTTGGCAAATTTTCTGACCATC  
TCTCTGCAAGGTTG **GGTTCGAG**AGCATCGTGCATGTATGGCGCGCGACTCG  
CCGG

M6-2(on construct)

CTTCGCTAACATAAGAAGCCATATAAGTCTACTAGCACACATGACACAATAT  
AAAGTTTAAAACACATATTCATAATCACTTGCTCACATCTGGATCACTTAGCA  
TGCATAAACTATTACAACCAAGGCTCATCTGTCAACAAACATAAGACACATT  
GCTCATGGAGAGGAGCCACTTGCTACATCTTCATTATTCTTAGAAAATTCTAT  
TGCGTCTTCATCCTGTTAATACACAAAAATAAGTCAGTTTTGGATAAATAAAT  
ACATATAGAAGAACATGAATTGATATGCAGGGAGTATAAATAAATACATATAG  
GAGAACATGAATCTGTGAACAAACACGGCTGGGAGCTAGGCAGCTAGCAGC  
TAGCGC

M6-3

ATTATTCAGTCTCATGTGATATTCGCTAATGGATCACTTTTATCATATATACAC  
CAATCTCTCCACCGTCATGGCCTTTTCTATTTCCATATTGTGATTGACTAGTG  
TTGCAGACTACAGTTACACACATGAACACATAACACACACACAAAATAATTAT  
AGGGCCTCTAAGAGGTCGGGGGATATTATTAGAGAGATAGGCTCAACGCGA  
TAGTGTATTCATCACGGAGTATTACATATATAAACCACAACCCTCCATACAAT  
TAATTAGTAAAATGAAGCATTTTTAAATAGTCCAAGGGGTAAAGTGAGAAAAAA  
TAGTTTAGGGGTACGTGGTCTAATGTAATGAAATAGTTTATGGCAGTAAAA  
TAGTTTTCTTTTCAAATATATATTCTCAAATCTCAATGAATTAAGCTATTCT  
CTGTAATAAATAACTGAAGAGTACATAAGCGGAATAATGTGTACATGTCTCA  
AGCACTACTGCACTAGCTCTGCCATGTGCCCATGTCTGGTCCCATCCAGAG  
AACTACCCTGCTGCTAGCTCATAAACACATTACACATAGGGAATACATTGC

ACCGTAAAAGTTCTCTGTATATAGAATCAACGGTGGATGCTAGGTGTGGTTC  
AAATAAATAGTAAAGCTGAACAATAATGGACACGAACTGCGC

M6-4

TTCGCTAGAATAAGATATTACGATACAGCAGGCTAGGAATTAATATAATTGTA  
TAGGCGTCAATTAATAATCCCAAGGTTGTTTTGCCCGGTTGAGTTCCTTTTT  
CTTAAGCTACATAGGTTGAGTAAATGTTTGTAGGGATGGAGTCAAAGGAAAG  
TGGGTAACATCAAGGTGCATCTGACTATAGTAAGGGAATCCTTCACCGGAG  
TGAGATTGCAAGGGGCTTGCGGGCCCTCTCTAGTGGGGAGGACTTGCTGA  
GGATGAAGCTCAAGCTCCACTGTCTTTGGTCTGGCTTCTCTTGAGAGCACC  
ATTGCTTGCTTACAGTCTCGAGTTGCCTATCTTCGTGATGGTGTGATGCCAATA  
CTGCCTTTTCTACCAGTAGTCCCCTTATGGCAAGAAGAAGAAATTTTATTGCT  
AATCTCAGGGCGAGGGAATGAGGGATCTGGTAGTTACTAGCCAGGATGAGT  
TGACAAGTTATCTATAGGATCTATATGGTGTGTTGAATCTTCTAAAGATGAAGA  
TAAAGATGAAGAGATGAAGATTAAGTGTTCATGCAAAACGAGGTGGTAATA  
GCGTGTGATTAATTAAGTTTTAATTGTTACAACTTGAAAATATATTAATATG  
ATATTTTAGAATAACTTTTCATATA

M6-5 (on construct)

ATCTCTGTCGCTGCCTCTGGACCCCTCTCGAGAGTTCCGCTCCACCGTTGG  
ACTTGCTCCGCTGTCGGCATCCAGAAATTGCGTGGCGGAGCGGCAGACGT  
GAGCCGGCACGGCAGGCGGCCTCCTCCTCCTCACGGCACCGGCAGCTA  
CGGGGGATTCTTTCCACCGCTCCTTCGCTTTCCCTTCTCGCCCGCCGT  
AATAAATAGACACCCCTCCACACCCTCTTTCCCAACCTCGTGTTGTTCCGG  
AGCGC

M6-6

GCGCCAATCAGATGGCCTCCGGCAGTCCGGCGAAAGGGAGGTGCGACCACC  
TTGTCCAACGTACTACGAGTGTTCGTGTCCAATCGGGTGGCGATGCGAC  
GATGATTATACCGCAAACCTTACTTCACCATGTTTCCTGCCAAAATTGACAG  
CCATGATCTTCAAGTGACATACCAATTATCCCAACCCAAATCGGGCATGCT  
TTAATTTTCCAGCCAGAAAAGAAAACAATGCAAGTAATATGATGCACGAGAC  
TGCTAGCTCCTCATTTCGTTTTATCTCCAGGATAAAATTGAATAAAATTCCAT  
TTCATATAGGAGTATGAAACTATCACATACTCAAATGTTTCGCACATTTCTTTT  
TGTACATGACCAAACATTTTACAATAACCACAGGAGATGGTTCTTCCTGTC  
TTCTTCCAAACCCCAAAGGAACAAGACTGAAAAATGCAAACAATGCACAG  
CTGTCTTACTCGCTCAGTGCACAAATTTGAAATACAGGATTACTAGGATCGC  
CAACACAAGGAGTGCTATGATGAAACCTATGATCCACTTG**TTCCTGTC**CATC  
CTCCTCACCATGGCCCCAATGATCCTTCTGCTCTTTCCGATGTTATCATCCA  
CGTTATGCAACTGCAACACCAACAAGATATGAATAACAGAGGGGGGAAGAC  
AAGGAAGCATGCATGGGCCTAAATCCATGTACATTAATCAAACATGATTTGT  
TTATTTATTTTAAACAATAATGCTACTGTGATCTATATCATATTTGATTAAC  
GCTGAACAATAATGCTACTGTGATCTATATATCATATTGCCGATTTGTCGT  
CGGTTGATTGTGCTTCAACTTCAATATCGACGAACAGTTATAAGCAGGTTCT  
GGAGGCCTAGAAATTACCACATTAGGCGGAGAAAAAACTAAACTATATTA

M6-7 (fused ends on construct)

AAACTAACAAAATCGGTTATACGATAACGGTCGGTACGGGATTTTCCCATCC  
TACTTTTCATCCCTGATGTAGGGATGAAAACGGTCGGTAACGGTCGGTAAAAT  
ACCTCTACCGTTTTTCATTTTCATATTTAACTTGCGGGACGGAAACAAAA

M7-1 (on construct)

GACCTGCAGGCATGCAAGCTTGGCACTGGCCGTCGTTTTACAACGTCGTGA  
CTGGGAAAACCCTGGCGTTACCCAACCTTAATCGCCTTGCAGCACATCCCC  
TTTCGCCAGCTGGCGTAATAGCGAAGAGGCCCGCACCGATCGCCCTTCCC  
AACAGTTGCGCAGCCTGAATGGCGAATGCTAGAGCAGCTTGAGCTTGGATC  
AGATTGTCGTTTTCCCGCCTTCAGTTTAACTATCAGTGTACTGAATTATTGTG  
GTGTAACAAACTACCTGCGACCTTGCAGCGAGTAAATTAACCCATTCTC  
AACACTTATTACTCTGCTCCCTCGGCCTTAAAATATAAATATTTTTTAAATAAT  
ATAAATATATTAAGAAAGTATAT

M7-2

GAACCGTTTAGGATTACCTTACTGGTTTTAAGGGTTNCAGCACCGCTTGGTC  
ACTGCATGAACAATGAAAAATCTTTAACAAAATTAATATGATTTTTGAAACCA  
ACTTTGTTTCTGCAAAAAATACACGACAGTTTGAAAAACGCGTACTTGGAAA  
AAGAGACTGTGGGAGTTAGAAAAGTACAGTGTA**CTGGAGAA**CACAGCCTAG  
CTTCNNAATCTTATCCTTCCGTAATCCGTAGCTCTTCAGAATCCAATGGCTA  
CAAGGAAGAGAGTTTCTCCCCAAAGGTGAAACGGAAACAAAGTCCAGTCC  
ACGGAAGTGCGTGTACGCTATAATACCGACTCAAACGATTCCCTTCTCCC  
ATCCATCCAGCTACACCACGTACACTACCGTGCCCAACTCTGCAACCCAAA  
GCTGAAGAGGCTGCACCTGCACAAAACCAAGCAAGCTGTGACGGCTCACG  
AGCGCGTGACCGCGTGAGAGAGAAAAAGAATTGAATACTAGTAGAAGACA  
ATGGTTCGGTGGGATGGCCAGGTCGAGACCCGG

M7-3 (on construct)

CTTCTACTCGCAAAACAAATTCGGTATTCTCTGCATA**TGCTCAAG**GTATATAT  
TAGAAAAACAGTAGCAATAGCATTAGCATTACTAATTGGTTGTAGATTGGGA  
AGCATCATATTGACTGTAGAATAATACGAAAAATCTGTTTATAACAGGGTTGA  
AAAGAAAAGCTGAAGCCTCTTCTAGTCGGATTGAGAATGTACGTGCACGT

M7-4

AGACAAACCAATCTGCCNAGCGAATGAGCATTCTAAATGGACCTTCAGCTA  
GCAGCATCAGTGCGGTGATGAACACTGCCATTCTGATGGACCTTTGGCGAG  
CAGCATCCGTGCG**GTGAAAAC**TGGCCCTCCGTTTAGTTTTCTCCCTGCAGC  
CTTCACGTAACCGACTGTAGCGAAATATTCTGTGCGCATTGCGTTTCCGCTT  
TCGCGGTGAACTGGCCCGG

M7-5

TATACCAACCAAGGGATGCTCCCGCAGCTCAAGGCCATGAGAGACGAGCT  
GTTTACAGAGGCCACTACGTC**CTCGACAC**CTTCAGACACCGGGCTGATCTCCT  
CCAGAAAGAGGAGGAGAAAGAAGATGAACAGGTGAGAAGCTCGTTTGAAT  
GTCAAGGCTCAATCCTGCCAAGCGAATCCGTTTCTCTCGTGCTAGAAGTAGT



AGCTTTCAGGATTTGGAGTCCATGATTCGTAGCCTGGAAGACGCCATTGCT  
GACACAAAGGAGTTCATCGTGTTTCTGATGAGCTGCCCTCCGG

M7-6

GGTGGTGCTACTGACGGCGACGGCGAGGGAGACGGTTCGCGGGAAGCTG  
GAGATGGCGCTGGCGGCGATCGAGCTGGTGGGAGCGGGGTTGGTGGI

M7-7

GCAGAGCGATCTCGATTGGCTCGTTTTTTCNGCGTCACGCAACATTTCTGCT  
TTCCCCTATCATCTCGTTGACAATGGGACGCAATGGGCGGATGAACATGGC  
AAACAAGTCAGCTTCAAGAAGGTATCTTTACGTGTAACCATGGCGATCAATC  
ACAGATTCAGATAGATTCATAAATTCTCATTTAATCTAGTTGCTGAGCAGATG  
TTCTTCCATTTTCATCCATTAGTTGCAGGAGAATCAGTCTGACAAGTGGGCAG  
GACATGGCAGTGACAGGGGGCTCATTGTGGCATGGAACAATCCAAGCACTC  
GTATGGTTCAGGAGTAATGCCTTCTTTTCTGAATGGAAGAGGAGTACACAA  
TTGGTGGCTGATTCATGAGGTTCTCTCATCTGAAACTAGACTTGTGTTTGT  
GCAAGCAATCTTGTCTTGGATTATATCCTGAAAATTTACGCGAAAAGCGCA  
GCACGAGCACTAGCAGAAATGTTAGTAACCCTGATGGATCCTGGGAGTATG  
ATGTCAATCGACATCTAGCTGCACTTTATGGATCGTATTGCTATGAATTGCC  
AAGAAGAACTCCCCATGGTGTATAAAGTGGTGAAGCAGTTTGAAGATTAT  
ATGTTTAGTAAAAATGAAGGGCCAACTTGTCAAATTCTGTCATAAACAAAGA  
ACAAAATGTACATCCAGAGGGAGGTAGCCTGTGTGAAAAGGAGATCAGCTA  
CTCATCAGCAGTTAATTTGCCACATTCTTTAGAAATGCTCCTTGAACCTTGTG  
CTGACAAGAACAGGTCCGTTGTTCTTGCTGTGGCTGGTGAAGTTACAGGG  
ACATGCTTATGAGCTGGGTGTGCCGCTTGCGCCGTCTCCGG

M7-8

CGGGGATTGGGAACCCGATATATAGCATTTTCTTTAGGCTTTATTCGATTAAT  
CACTGTGAGGGAGGGATTGGAGGGGATTTATTTACACCTATTGTGGNGNG  
GAATTATTCTCCCTCAATCTCCTCCAATCCTTTTCAATCTCTTTCAAACCGAA  
CAAGCCCTTACACAATTAGTTTTCGAGCTCTGAAGAGTTATCCTAGGCTGGAA  
ATGGCGCCATAATCTCCAATTAATTGGCTCTCTTAACCGTACGTACCCAGTA  
CCCTGGCCATTAGTACCATTGATGTAATTCGCAGTTNNAANNGTAGCCTCT  
GCCTCTCTAGCAGGCAGCTGGTGACCCTGAGCTAGC

M7-9

CCGCCTGCGTCTGCATCCACAGAGACGANAATTCCCAAGTTTCAGAGATGA  
TGAAGTAGTGCTCTGAACAATGGCAAAGTTCAGAGTTTCAGAGATGATACG  
ATGCTTTGCAGGTGAAAATGCAGATTATTACCTGGTTTGCACAGGGTGTGG  
TTGGTCACAGTAGTACTGATCGATGATGATTGGATTGGAGACGTTCTTCATC  
ACGATGCCCTCGAACCTCAGGTTGTGAACATACCCCATCCCTCCCTGATCN  
AGCACAAAGTTGCATTTTGTATATAAATACTCCTTTTTCTGAATAGATTGTTT  
TTGTCAGAACCAAGAACTGCAAGTGTTTTTTCCCTCATCAGATTGTTCTTGT  
GAGAATTCAGAAGTGTGATGTCCTGCAACTAACCTGCCAACTCTTGATCCGT  
ACACCGTTGGTTGTGTTTGTGTCAGCAAGCAGGTGTCCACCCTCACGTTCTCTA  
TTCTGTGAGTGGTCCGG

M7-10

ATATGGCAATACAGCTGANGTTCCTTTTGGCTGTANAANAATTTTCAGTATTTCT  
TTTCCTGAAAAACGTGTTCCACCAATATTGAGTCACCTAGAAAAGGTTGAGCGG  
TCTTCAGGCTAGGCGGCTAGCACCATAAGGTGGTGGGCTTGCCAACCTAG  
GTTTCGAGCCTCACTTTTCTTAATAAATTCCGATATGAGGGCTCCTCCTCTCG  
TATCCAGTGTTTTGTTAATATTTCAGTCACTCAAGACAACCTACAGCCAATTT  
GAAACAAGTTCATACAAATGAAATTTGTGTACCTCCTGACTCTTTGGCCTCTT  
TTTTGGCGCCATTTGGCTCACTTTGAGCAGGACCAAGGGCTGTTTTCAGAAA  
AAGATGGGTTGCCAAGGAAAGCGTTTCAAACGGGTGGAAGGGCGAGAGG  
G**GTCTATAC**TCCGGGGCATTCTCCCGTCGTGGCCTGATGGGAACGGCTGC  
CGATGCAAAAAGATTGCTCATGACATTCCATGCAATGGAAGTCGTCCAAA  
GGGAGGAGTCGTCCAGCCAAACCTTCTCCTTAGCTCTGTTGTANATGCTCC  
ATGGATGGCGAGTGTGTGTACCGTCCTGCCGTTTTTTGGACCTGTTTTGTTTT  
TGATTG

M7-11 (on construct)

AGAGAGACTGGTGATTTTCAGCGTGTCTCTCCNAATGNNNTGAACTTCCTTA  
TATAGAGGAAGGGTCTTGCGAAGGATAGTGGGATTGTGCGTCATCCCTTAC  
GTCAGTGGAGATATCACATCAATCCACTTGCTTTGAAGACGTGGTTGGAAC  
GTCTTCTTTTTCCACGATGCTCCTCGTGGGTGGGGTCCATCTTTGGGACC  
ACTGTCGGCAG

M7-12 (on construct)

GCGCGGGGAGAGGGCGGTTTTCGTATTGGCTAGAGCAGCTTGCCAACATGG  
TGGAGCACGACACTCTCGTCTACTCCAAGAATATCAAAGATACAGTCTCAGA  
AGACCAAAGGGCTATTGAGACTTTTCAACAAAGGGTAATATCGGGAAACCTC  
CTCGGATTCCATTGCCAGCTATCTGTCACTTCATCAAAGGACAGTAGAAA  
AGGAAGGTGGCACCTACAAATGCCATCATTGCGATAAAGGAAAGGCTATCG  
TTCAAGATGCCTCTGCCGACAGTGGTCCCAAAGATGGACCCCCACCCACGA  
GGAGCATCGTGGAAAAAGAAGACGTTCCAACCACGTCTTCAAAGCAAGTGG  
ATTGATGTGAACATGGTGGAGCACGACACTCTCGTCTACTCCAAGAATATCA  
AAGATACAGTCTCAGAAGACCAAAGGGCTATTGAGACTTTTCAACAAAGGGT  
AATATCGGGAAACCTCCTCGGATTCCATTGCCAGCTATCTGTCACTTCATC  
AAAAGGACAGTAGAAAAGGAAGGTGGCACCTACAAATGCCATCATTGCGAT  
AAAGGAAAGGCTATCGTTCAAGATGCC**TCTGCCGA**CAGTGGTCCCAAAGAT  
GGACCCCCACCCACGAGGAGCATCGTGGAAAAAGAAGACGTTCCAACCAC  
GTCTTCAAAGCAAGTGGATTGATGTGATATCTCCACTGACGTAAGGGATGAC  
GCACAATCCCCTATCCTTCGCAAGACCTTCTCTATATAAGGAAGTTCAT  
TTCATTTGGAGAGGACACGCTGAAATCACCAGTCTCTCTCTACAAATCTATC  
TCTCTCGAGCTTTTCGCAGATCCGGGGGGCAATGAGATATGAAAAAGCCTGA  
ACTCACCGCGACGTCTGTGCGAGAAGTTTCTGATCGAAAAGTTCGACAGCGT  
CTCCGACCTGATGCAGCTCTCGGAGGGCGAAGAATCTCGTGCTTTTCAGCTT  
CGATGTAGGAGGGCGTGGATATGTCCTGCCGGGTAAATAGCTGCGC

M7-13 (on construct)

CTTGGCTAACATAAGAAGCCATATAAGTCTACTAGCACACATGACACAATAT  
AAAGTTTAAAACACATATTCATAATCACTTGCTCACATCTGGATCACTTAGCA  
TGCATAAACTATTACAACCAAGGCTCATCTGTCAACAAACATAAGACACATT  
GCTCATGGAGAGGAGCCACTTGCTACATCTTCATTATTCTTAGAAAATTCTAT  
TGCGTCTTCATCCTGTTAATACACAAAAATAAGTCAGTTTTGGATAAATAAT  
ACATATAGAAGAACATGAATTGATATGCAGGGAGTATAAATAAATACATATAG  
GAGAACATGAATCTGTGAACTAACACGGCTGGGAGCTAGGCAGCTAGCAGC  
TAGCGC

M7-14 (fused ends on construct)

AATCGGTTATACGATAACGGTCGGTACGGGATTTTCCCATCCTACTTTTCATC  
CCTGGATGGATGAAAACGGTCGGTAACGGTCGGTAAAATACCTCTACCGTT  
TTCATTTTCATATTTAACTTGCGGGACGGAAACGAAAACGGGATATACCGGT  
GAAACGGTCGGG

M7-15 (on construct)

GCGCAGCTATTTACCCGCAGGACATATCCACGCCCTCCTACATCGAAGCTG  
AAAGCACGAGATTCTTCGCCCTCCGAGAGCTGCATCAGGTCCGAGACGCT  
GTCGAACTTTTCGATCAGAACTTCTCGACAGACGTCGCGGTGAGTTCAGG  
CTTTTTCATATCTCATTGCCCCCGGATCTGCGAAAGCTCGAGAGAGATAGA  
TTTGTAGAGAGAGACTGGTGATTTTCAGCGTGTCTCTCCAAATGAAATGAAC  
TTCCTTATATAGAGGAAGGGTCTTGCGAAGGATAGTGGGATTGTGCGTCAT  
CCCTTACGTCAGTGGAGATATCACATCAATCCACTTGCTTTGAAGACGTGGT  
TGGAACGTCTTCTTTTTCCACGATGCTCCTCGTGGGTGGGGGTCCATCTTTG  
GGACCACTGTCGGCAGCGACGGCAGAGGCATCTTGAACGATAGCCTTTCT  
TTATCGCAATGATGGCATTGTAGGTGCCACCTTCTTTTTCTACTGTCTTTT  
GATGAAGTGACAGATAGCTGGGCAATGGAATCCGAGGAGGTTTCCCGATAT  
TACCCTTTGTTGAAAAGTCTCAATAGCCCTTTGGTCTTCTGAGACTGTATCTT  
TGATATTCTTGAGTAGACGAGAGTGTGCTGCCACCATGTTACATCAAT  
CCACTTGCTTTGAAGACGTGGTTGGAACGTCTTCTTTTTCCACGATGCTCCT  
CGTGGGTGGGGGTCCATCTTTGGGAC

M9-1

TTATCTGAAGATCTAACAAGATGAAAGAGGAACTGATTCTGCGTTTCCGAAC  
AGTGAACGGTGCCTGCATTTGTGTTTCTTCTTTGCAAACCGAAGCTAGTACA  
TTATACTCTGCTACTACTTTAAGCACTGAGACAATGTCATAGTTAAATGTTCA  
ATGCTCCTTTCAGTATATTAGTATTAAGTGCTAAAAATAACTGAAAAGACATA  
ACTATAGAATGCAGCCGCAAAGCCTGCATCAAAGGACCTAAACGCCAGCTT  
AAATAGAAAGACAATTTGGTAAGTTCGATTCCAACGTGATACATTAACCTCTT  
GACCCAATTCCATGTGATGCCAAACCGACCGAACGGCTTACGCGATTTAAC  
AAAGATTCATCTTTGCGATTGAAAAATGCATGTGAATAAAAAGCAGAGGCCT  
CACATGCTCAGCTTAACGGTTATCTTTCAGTTCAGAGCCAAACCCTGCATGG  
CTGCGTATAGCTGAAAAATGAGACGGNAATAAAATTGCAGCTGAATCCAGAT  
ACCATTTGGTATTTTAGCAATTGACATTAACCTCGCATCCAAATCAAGGTCTAA  
TTAACATAAGTTTATATGGTTGCTGCTTGTGCTTAAAGAATCAGGAAAGCAA

CCTCTGAATTTGGAGGTAATCCATGAAAGTGAGGTTGTGTAGACATTTGATT  
TGAAAGCTAATAACTAAATTTTACTGAATATTTACCTAAACACAATTCCATTC  
CATTGTGAAACGATCCCTATACATCATGTACGCAACCTACCAAAAATAAGA  
AGAATGATGTCAAACAAATCCGCATTGTCCTGATCACTAATCTTCCAGGAAT  
TTCCCTCCAGAGAAGATCAAAGCACGGCGTCAGTACGTTGAGCAGTGACA  
CCCTCGCGTTCACGAGCGCCCGG

M9-2 (fused ends on construct)

TAACAAAATCGGTTATACGATAACGGTCGGTACGGGATTTTNNCANNCTACT  
TTCATCCCTGAGAGCTAGGGATGAAAACGGTCGGTAACGGTCGGTAAAATA  
CCTCTACCGTTTTTCATTTTCATATTTAACTTGCGGGACGGAAACGAAAACGG  
GATATACCGG

M9-3

CAAGGAAGGTGAGGAGGAAGCCGAGCAAGCTGCAGCCGGCGAGCGC