

# Supporting Information

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## Guide to Supporting Sequence Files (FASTA format)

The following DNA sequence alignment files contain amplified products from:

- (Dataset S2) *TEBP*β F1: post-RNA injection, F1 generation partial *TEBP* β DNA
- (Dataset S3) *Actin* F1: post-RNA injection, F1 generation complete *Actin* I DNA
- (Dataset S4) *Actin* F2: post-RNA injection, F2 generation complete *Actin* I DNA
- (Dataset S5) *Actin* F1 DNA: post-DNA injection, F1 generation complete *Actin* I DNA

Highlighted in red (A), green (T), yellow (G), and blue (C) in Dataset S1 are nucleotides that differ from the consensus set of sequences shown.

An asterisk indicates substitutions in the injected sequences that distinguish them from endogenous molecules.

Abbreviations are as follows:

*TEBP*β<sub>inj</sub>\_RNA: sequence of the injected *TEBP* β RNA

*Actin*<sub>inj</sub>\_RNA: sequence of the injected *Actin* I RNA

*Actin*<sub>inj</sub>\_DNA: sequence of the injected *Actin* I DNA

Sequences of cloned *TEBP*β and *Actin* I nanochromosomes that derive from the progeny of injected cells display multiple allelic differences from the injected RNA and DNA. Sequence names correspond to analyzed DNA from the lane number on the respective gels in Figs. 1 and 2.

**Table S1. PCR primers for generating probes and DNA sequence data (5'-3')**

### *TEBP* β probe

*TEBP*β<sub>F</sub> CATTGAAGTCTACGTC<sup>\*</sup>AAAGAATCATACCCAC

*TEBP*β<sub>R</sub> GGGTCTTCTTTGA<sup>\*</sup>ACCAGTGGTGGTC

### *Actin* I probe

*Actin*<sub>I</sub><sub>F</sub> GTCGAGACTGAT<sup>\*</sup>AAAAGAGTCGATTGTGGC

*Actin*<sub>I</sub><sub>R</sub> GATCTCATTCA<sup>\*</sup>ACCCGTCATAGCCAATC

### TBE1 transposase probe

TBE1<sub>F</sub> ATGCGAGACAAA<sup>\*</sup>AATTACAAGCTATTGGG

TBE1<sub>R</sub> TTA<sup>\*</sup>ACTTA<sup>\*</sup>ACTCTAAA<sup>\*</sup>ACTTATTATAAACATTCACTCTCCCTTC

### *Pol*-α probe

*Pol*α<sub>F</sub> GATCAAAGTGGA<sup>\*</sup>ACACAAGTTATTTGATGCTAAAAGTAG

*Pol*α<sub>R</sub> GGAATCTAGATGAGCCAAA<sup>\*</sup>ACCAAGGCAAC

### *TEBP* α probe

*TEBP*α<sub>F</sub> CGCAAAGAGATT<sup>\*</sup>CGAAGATCTCCCATC

*TEBP*α<sub>R</sub> GAACATATCGTTGGAGATA<sup>\*</sup>ACTGAGTATTGGGTG

### *TEBP* β PCR primers

*TEBP*β<sub>PCR</sub><sub>F</sub> GCTCATTCTTGGTTGATCTCTTTGAGGCC

*TEBP*β<sub>PCR</sub><sub>R</sub> GAGCAAATCACAACAAGTTCAACAACAAAGCG

### *Actin* I PCR primers

*Actin*<sub>I</sub><sub>telo</sub><sub>F</sub> CCCCAAACCCCAA<sup>\*</sup>ACCCCAT<sup>\*</sup>AAGGATATATTTTGACATATTATG

*Actin*<sub>I</sub><sub>telo</sub><sub>R</sub> CCCCAAACCCCAA<sup>\*</sup>ACCCCAT<sup>\*</sup>CGATCAAATAAGTTATTTTG

## Other Supporting Information Files

[Dataset S1 \(PDF\)](#)

[Dataset S2 \(TXT\)](#)

[Dataset S3 \(TXT\)](#)

[Dataset S4 \(TXT\)](#)

[Dataset S5 \(TXT\)](#)