

**Supplemental Figure 1 The DNA sequences used to make the DHJS phagemid vectors.**

The loxP and homologous region fragments were made from complementary oligonucleotides of the sequences shown, while sequence A was amplified from the Top3 $\alpha$  gene and sequence B was amplified from the tetracyclin resistance gene using the primers shown. The final configuration of the segments is illustrated, with the restriction enzyme sites indicated below the schematic (\* these sites are destroyed after ligation into the vector). The inserts were cloned into the multiple cloning sites of pBluescript SK+ and pBluescript SK- to make the 4 different phagemid vectors used to construct the DHJS.

Sup Figure 1

<u>Segment</u>	<u>Sequence</u>
LoxP1	AGCTAGATCTATAACTTCGTATAGCATAACATTATACGAAGTTATG TCTAGATATTGAAGCATATCGTATGTAATATGCTTCAATACTTAA
Homologous1	AATTCAGGACCTTGAACGCGAGGTGCGCGGCTGTCAGGATTACGCGTGATTATCTGGC GTCCTGGAACCTTGCCTCCACGCGCCGACAGTCCTAATGCGCACTAATAGACCGGGCC
Homologous2	GGCCGCATCCGAGCCATTGGAAGATTAGGTTCTGCTAGCGCACACAATTGATGACTTGAT CGTAGGCTCGGTAACCTTCTAATCCAAGACGATCGCGTGTGTTAACTACTGAACTAGATC
LoxP2	CTAGAATAACTTCGTATAGCATAACATTATACGAAGTTATCATATGAGCT TTATTGAAGCATATCGTATGTAATATGCTTCAATAGTATAC
<u>Primers</u>	<u>Sequence</u>
Sequence Af	CCCGGGCTACTCGGTGTACAACAAGGTCTTTCG
Sequence Ar	GCGGCCGCACATCAATAATCTCGTAGCCAATGTTC
Sequence Bf	CCCGGGGCTATATGCGTTGATGCAATTTTC
Sequence Br	GCGGCCGCCGAAGTGGCGAGCCCGATC

Assembly of the DNA fragments in pBlueScript SK+/- MCS

