File S1

Supplementary Materials and Methods

Sequence of SYFP2 (Drosophila codon usage adjusted)

ATGGTGAGCAAGGGCGAGGAGCTGTTCACCGGCGTGGTGCCCATCCTGGTCGAGCTGGACGGCGACGTGAACGGCCACAAGTTCAGCGTGC

GCGGCGAGGGCGAGGGCGACGCCACCAACGGCAAGCTGACCCTGAAGCTGATCTGCACCACCGGCAAGCTGCCCGTGCCCTGGCCCACCCT

CGTGACCACCCTGGGCTACGGCGTGCAGTGCTTCGCCCGCTACCCCGACCACATGAAGCAGCACGACTTCTTCAAGTCCGCCATGCCCGAGGG

CTACGTCCAGGAGCGCACCATCTTCTTCAAGGACGACGGCACCTACAAGACCCGCGCCGAGGTGAAGTTCGAGGGCGACACCCTGGTGAACC

GCATCGAGCTGAAGGGCATCGACTTCAAGGAGGACGGCAACATCCTGGGCCACAAGCTGGAGTACAACTTCAACAGCCACAACGTCTACATC

ACCGCCGACAAGCAGAAGAACGGCATCAAGGCCAACTTCAAGATCCGCCACAACGTGGAGGACGGCGGCGTGCAGCTCGCCGACCACTACC

AGCAGAACACCCCCATCGGCGACGGCCCCGTGCTGCTGCCCGACAACCACTACCTGAGCTACCAGTCCAAGCTGAGCAAGGACCCCAACGAG

AAGCGCGACCACATGGTCCTGCTGGAGTTCGTGACCGCCGCCGGCATCACCCACGGCATGGACGAGCTGTACAAGTAA

Sequence of genomic *giant* 26149bp

Drosophila melanogaster Reference Sequence Release 5.30

Start X: 2312831

End X: 2338979

Primers for recombineering

***gt –YFP* fusion**

Primer_gtCYFP_F:

CCCTCAAGGTCCAGCTGGCCGCCTTCACCTCCGCCAAAGTAACCACCGCCGATTATGATATTCCAACTACTGCAAGCATGGTGAGCAAGGGCG

AG

Primer_gtCYFP_R:

ACATACGATTCGGATCCTCGCGTTCAACGCATCAAGAGAGGAGTGGACCTTTACTTGTACAGCTCGTCCATGC

For cloning from BAC to attB_3xP3_DsRed_P15A-amp

gt_intF2:

TATCTCAATAATACACATCTAGTTTCGGATCCTTAAGTCTACTTGAAACTCAGGCATTCAAATATGTATCC

gt_intR2:

CGTCATAAATGGCAGTGTCTTAAATTACAATCCTTCCCTTGGTCTTCCTCGTCGACGATGTAGGTCACG

For verification of the insertion of the vector attB into attP2 landing site

See Ludwig *et al.* (2011).

Primers for genotyping

***p[hb-lacZ]* marker (800bp) for balancer second chromosome**

Z353 CTGCCAGTTTGAGGGGACGACGACA

hb32 ACCAACGTAATCCCCATAGAAAA

Positive marker (80bp) of PCR genotyping reaction

sna-F CCCACGTGGACGTCAAGAA

sna-R GAGCGACATCCTGGAGAAAGA

Male fertility factor *kl5* gene on the Y chromosome (240bp)

y6527 GGCCTAATTGGAGACCTGTTTC

y6749 CTGGTTTTGGTATGTCTTGTTA

***p[GAL4-Kr.C]* > *p[UAS-GFP.S65T]* on the X chromosome (600bp)**

Pry1 CCTTAGCATGTCCGTGGGGTTTGAAT

5542GFP TTGCATCACCTTCACCCTCTCCCCT