

Supplementary information

A drug stabilizable GAL80^{ds} for conditional control of gene expression via GAL4-UAS and CRISPR-dCas9 systems for *Drosophila*

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attB40 recombinase site for ΦC31 recombinase mediated cassette exchange

aTub84B tubulin promoter

SV40 nuclear localization signal (NLS)

ecDHER22 destabilizing domain (DD)

GAL80 inhibitor of Gal4 transcriptional activator

T2A 2A self-cleaving peptide

mCherry fluorescent marker

SV40 late polyadenylation signal

a - single architecture

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b - double architecture

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Supplementary Figure 1. The DNA sequences of single and double architecture drug stabilizable GAL80^{ds}. Each architecture has the same *attB40* recombinase site for ΦC31 recombinase mediated transgenesis, constitutively driven by *αTub84B* tubulin promoter, *SV40* nuclear localization signal (NLS), *GAL80* inhibitor of *GAL4* transcriptional activator, *T2A* 2A self-cleaving peptide, *mCherry* fluorescent marker and *SV40* late polyadenylation signal, but one or two copies of *DHFR22-DD*. These single and double architecture *GAL80^{ds}* transgene sequences were verified by Sanger sequencing and subsequently used for generating transgenic flies. **(a)** Single architecture drug stabilizable GAL80^{ds}, DHFR-22 DD fusion to N-terminus of GAL80 (DD-GAL80) sequence. **(b)** Double architecture drug stabilizable GAL80^{ds}, DHFR-22 DD fusion to both N- and C-termini of GAL80 (DD-GAL80-DD) sequence.