**Supplementary file 1**

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| Transgenic line | Gateway | Primers |
| Tg(Xla.Tubb2:QF2;he1.1:mCherry)c663 | P5’E:Xla.Tubb2 | Forward: 5’-GGGGACAACTTTGTATAGAAAAGTTGTCTAGACCCTGTCTGTTCCTGA-3’Reverse: 5’- GGGGACTGCTTTTTTGTACAAACTTGAATCAGTGGATGGTGTGGCCCT-3’ |
| pME:QF2-pA | Forward: 5’ -GGGGACAAGTTTGTACAAAAAAGCAGGCTCAACATGCCACCCAAGCG -3’Reverse: 5’ - GGGGACCACTTTGTACAAGAAAGCTGGGTAAAAAACCTCCCACACCTCC -3’ |
| P3’E:SV40pA;HE1.1:mCherry | Forward: 5’ - GGGGACAGCTTTCTTGTACAAAGTGGGATCCAGACATGATAAGATACAT -3’Reverse: 5’ - GGGGACAACTTTGTATAATAAAGTTGCCATAGAGCCCACCGCAT -3’ |
| Tg(QUAS:mApple-CAAX; he1.1:mCherry)c636 | P5’E:QUAS | Forward:GGGGACAACTTTGTATAGAAAAGTTGGGGTAATCGCTTATCCTCGGATAReverse:GGGGACTGCTTTTTTGTACAAACTTGACGCGTCTTCGAGGTCGAGGGA |
| pME:mApple-CAAX | Tol2kit v2.0 (#768) from Kristen Kwan |
| P3’E:SV40pA;HE1.1:mCherry | Same as above |
| Tg(QUAS:GCaMP6f)c587 | P5’E:QUAS | Same as above |
| pME:GCaMP6f | Forward: 5’-GGGGACAAGTTTGTACAAAAAAGCAGGCTACGCCGCCACCATGGGTTCTCATCATCATCATCATCAT- 3’Reverse: 5’-GGGGACCACTTTGTACAAGAAAGCTGGGTTCACTTCGCTGTCATCATTTGTAC-3’ |
| P3’E:polyA  | Tol2kit v1.2 (#302) from Chi-Bin Chien |
| Tg(QUAS:loxP-mCherry-loxP-GFP-CAAX)c679 | P5’E:QUAS | Same as above |
| pME:loxP-mCherry-stop-loxP | Tol2kit v2.0 (#759) from Kristen Kwan |
| P3’E:GFP-CAAX-pA | Forward: 5’ -GGGGACAGCTTTCTTGTACAAAGTGGAAATGGTGAGCAAGGGCGAG-3’Reverse: 5’- GGGGACAACTTTGTATAATAAAGTTGAAAAAACCTCCCACACCTCCCCC-3’ |
| Tg(QUAS:loxP-mCherry-loxP-BoTxBLC-GFP)c674 | P5’E:QUAS | Same as above |
| pME:loxP-mCherry-stop-loxP | Tol2kit v2.0 (#759) from Kristen Kwan |
| P3’E:BoTxBLC-GFP-stop | Forward: 5’ -GGGGACAGCTTTCTTGTACAAAGTGGAAATGCCCGTGACAATTAACAATT-3’Reverse: 5’- GGGGACAACTTTGTATAATAAAGTTGTCACTTGTACAGCTCGTCCA-3’ |