**Supplemental Table 3.** Summary statistics for each ovoD co-selection experiment.

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Testing three ovoD sgRNAs** |  |  |  |  | **Fertility** | | **Founders** | | **Mutant offspring** | |
| **Experiment** | **Genotype injected** | **ovoD sgRNA** | **target gene sgRNA** | **target:ovoD sgRNA ratio** | **% Fertile Females (*n*)** | **% Fertile Males (*n*)** | **% Female Founders** | **% Male Founders** | **Mean % Edited offspring (from female G0s)** | **Mean % Edited offspring (from males G0s)** |
| Standard CRISPR control (attp40) | yv ;; nos:Cas9(attP40) | n/a | *ebony-1* | n/a | 92% (n = 13) | 94% (n = 18) | 25% (n = 12) | 18% (n = 17) | 9.65% | 13.47% |
| Standard CRISPR control (attP2) | yv ;; nos:Cas9(attP2) | n/a | *ebony-1* | n/a | 74% (n = 19) | 69% (n = 16) | 79% (n = 14) | 91% (n = 11) | 60.56% | 77.6% |
| no ovoD-sRNA control | ovoD1 ;; nos:Cas9 | n/a | *ebony-1* | n/a | 0% (n = 29) | 68% (n = 19) | 0 | 77% (n = 13) | - | 47.63% |
| ovoD-sgRNA 1 + ebony | ovoD1 ;; nos:Cas9 | ovoD1-1 | *ebony-1* | 1:1 | 50% (n = 6) | 100% (n = 17) | 67% (n = 3) | 41% (n = 17) | 66.67% | 37.48% |
| ovoD-sgRNA-2 + ebony | ovoD1 ;; nos:Cas9 | ovoD1-2 | *ebony-1* | 1:1 | 56% (n = 16) | 100% (n = 17) | 78% (n = 9) | 71% (n = 17) | 56.11% | 39.63% |
| ovoD-sgRNA-3 + ebony | ovoD1 ;; nos:Cas9 | ovoD1-3 | *ebony-1* | 1:1 | 28% (n = 25) | 89% (n = 9) | 86% (n = 7) | 13% (n = 8) | 62.60% | 12.50% |
| **Three additional *ebony* knock-outs** |  |  |  |  | **Fertility** | | **Founders** | | **Mutant offspring** | |
| **Experiment** | **Genotype injected** | **ovoD sgRNA** | **target gene sgRNA** | **target : ovoD sgRNA ratio** | **% Fertile Females (*n*)** | **% Fertile Males (*n*)** | **% Female Founders** | **% Male Founders** | **Mean % Edited offspring (from female G0s)** | **Mean % Edited offspring (from males G0s)** |
| *ebony-2* | ovoD1 ;; nos:Cas9 | ovoD1-2 | *ebony-2* | 2:1 | 61% (n = 18) | 69% (n = 13) | 64% (n = 11) | 44% (n = 9) | 12.19% | 5.68% |
| *ebony-3* | ovoD1 ;; nos:Cas9 | ovoD1-2 | *ebony-3* | 2:1 | 62% (n = 21) | 100% (n = 13) | 85% (n = 13) | 62% (n = 13) | 26.52% | 17.06% |
| *ebony-4* | ovoD1 ;; nos:Cas9 | ovoD1-2 | *ebony-4* | 2:1 | 75% (n = 12) | 100% (n = 16) | 100% (n = 9) | 67% (n = 15) | 89.80% | 39.69% |
| **Knock-in experiments** |  |  |  |  | **Fertility** | | **Founders** | | **Mutant offspring** | |
| Injection | **Genotype injected** | **ovoD sgRNA** | **target gene sgRNA** | **target sgRNA: ovoD sgRNA: donor ratio** | **% Fertile Females (*n*)** | **% Fertile Males (*n*)** | **% Female Founders** | **% Male Founders** | **Mean % Edited offspring (from female G0s)** | **Mean % Edited offspring (from males G0s)** |
| Control - gsb-n CRIMIC | yv ;; nos:Cas9 | n/a | *gsb-n* | 2:-:3 | 79% (n = 28) | 75% (n = 16) | 50% (n = 22) | 50% (n = 12) | 16.69% | 13.23% |
| gsb-n CRIMIC | ovoD1 ;; nos:Cas9 | ovoD1-2 | *gsb-n* | 2:1:3 | 54% (n = 13) | 100% (n = 9) | 71% (n = 7) | 38% (n = 8) | 24.47% | 14.26% |
| adgf-a CRIMIC | ovoD1 ;; nos:Cas9 | ovoD1-2 | *adgf-A* | 2:1:3 | 60% (n = 15) | 86% (n = 8) | 100% (n = 9) | 29% (n = 7) | 64.27% | 4.21% |
| CG8080 CRIMIC | ovoD1 ;; nos:Cas9 | ovoD1-2 | *CG8080* | 2:1:3 | 38% (n=16) | 100% (n = 15) | 50% (n = 6) | 20% (n = 15) | 5.78% | 1.35% |