

Table S8 Evaluation of the Dark-fly ROH regions

Numbers of overall SNPs and homo SNP fraction in each ROH region were calculated from the VarScan data, and mean homozygosity were calculated using the R program. Statistical tests were performed by comparing mean homozygosity of each ROH region with mean homozygosity of the whole genome using the Welch t-test and by comparing homo SNP fraction of each ROH region with homo SNP fraction of the whole genome using the Fisher's exact test. Three of 24 ROH regions (ROH ID#8, 12 and 18) failed to show significantly high homozygosity (p-value < 0.01).

| ROH ID# | Ch. | position start | position end | SNP # | homo SNP fraction % | homozygosity mean±SD | p-value Welch t-test | p-value Fisher's test |
|---------|-----|----------------|--------------|-------|---------------------|----------------------|----------------------|-----------------------|
| ROH1    | 2L  | 3353705        | 3669168      | 2244  | 95.4                | 0.976 ± 0.116        | < 2.2e-16            | < 2.2e-16             |
| ROH2    | 2L  | 6535198        | 6782752      | 1496  | 96.5                | 0.983 ± 0.096        | < 2.2e-16            | < 2.2e-16             |
| ROH3    | 2L  | 8847085        | 9109796      | 1647  | 96.5                | 0.984 ± 0.093        | < 2.2e-16            | < 2.2e-16             |
| ROH4    | 2L  | 10278630       | 10524864     | 1477  | 97.5                | 0.988 ± 0.078        | < 2.2e-16            | < 2.2e-16             |
| ROH5    | 2L  | 13521459       | 13806482     | 1420  | 94.1                | 0.980 ± 0.125        | < 2.2e-16            | 3.61E-12              |
| ROH6    | 2L  | 13806743       | 14034237     | 1223  | 96.3                | 0.971 ± 0.107        | < 2.2e-16            | < 2.2e-16             |
| ROH7    | 2L  | 15628469       | 15854613     | 1006  | 96.5                | 0.982 ± 0.102        | < 2.2e-16            | < 2.2e-16             |
| ROH8    | 2R  | 2174959        | 2453604      | 443   | 74.7                | 0.865 ± 0.252        | 1                    | 1                     |
| ROH9    | 2R  | 2722221        | 2975600      | 741   | 94.7                | 0.972 ± 0.122        | 4.47E-12             | 1.09E-08              |
| ROH10   | 2R  | 12738094       | 13006423     | 1247  | 94.7                | 0.974 ± 0.119        | < 2.2e-16            | 1.87E-13              |
| ROH11   | 3L  | 3118085        | 3327625      | 1094  | 95.7                | 0.978 ± 0.110        | < 2.2e-16            | < 2.2e-16             |
| ROH12   | 3L  | 7532105        | 7813157      | 1637  | 90.2                | 0.948 ± 0.169        | 4.28E-02             | 3.06E-02              |
| ROH13   | 3L  | 14059399       | 14275678     | 1346  | 96.1                | 0.981 ± 0.100        | < 2.2e-16            | < 2.2e-16             |
| ROH14   | 3L  | 15737620       | 15945049     | 765   | 92.4                | 0.963 ± 0.141        | 9.71E-06             | 4.73E-04              |
| ROH15   | 3L  | 18793182       | 19024297     | 923   | 96.0                | 0.983 ± 0.092        | < 2.2e-16            | 2.64E-15              |
| ROH16   | 3L  | 20560665       | 20819130     | 436   | 93.1                | 0.963 ± 0.146        | 1.04E-03             | 1.46E-03              |
| ROH17   | 3L  | 22471441       | 22725139     | 545   | 95.8                | 0.978 ± 0.112        | 3.25E-14             | 4.27E-09              |
| ROH18   | 3R  | 80650          | 293579       | 123   | 90.2                | 0.941 ± 0.180        | 5.12E-01             | 3.64E-01              |
| ROH19   | 3R  | 2862778        | 3085343      | 468   | 94.9                | 0.968 ± 0.144        | 3.73E-05             | 3.05E-06              |
| ROH20   | 3R  | 3257401        | 3475620      | 874   | 95.4                | 0.973 ± 0.126        | 1.95E-13             | 2.49E-12              |
| ROH21   | 3R  | 8358059        | 8659641      | 1099  | 94.7                | 0.971 ± 0.127        | 5.77E-15             | 4.19E-12              |
| ROH22   | 3R  | 9912039        | 10141059     | 1272  | 95.7                | 0.978 ± 0.113        | < 2.2e-16            | < 2.2e-16             |
| ROH23   | 3R  | 12540659       | 12771162     | 939   | 94.8                | 0.971 ± 0.129        | 1.47E-12             | 9.12E-11              |
| ROH24   | 3R  | 22056540       | 22307403     | 1019  | 96.0                | 0.981 ± 0.100        | < 2.2e-16            | < 2.2e-16             |