

**Supplemental Table S13. Summary of recombinant events in hybrids.**

| Samples                            | Number of uniquely mapped reads | Number of recombinant reads | Number of recombinant genes | Recombinant reads per gene |
|------------------------------------|---------------------------------|-----------------------------|-----------------------------|----------------------------|
| BTF <sub>1</sub> _L <sub>1</sub>   | 14,329,687                      | 8940 (0.0624%)              | 806                         | 11.09                      |
| BTF <sub>1</sub> _L <sub>2</sub>   | 14,552,092                      | 2418 (0.0166%)              | 285                         | 8.48                       |
| BTF <sub>1</sub> _L <sub>3</sub>   | 11,160,044                      | 2197 (0.0197%)              | 216                         | 10.17                      |
| BTF <sub>2</sub> _L <sub>1</sub>   | 14,165,427                      | 7861 (0.0555%)              | 974                         | 8.07                       |
| BTF <sub>2</sub> _L <sub>2</sub>   | 12,361,806                      | 1526 (0.0123%)              | 223                         | 6.84                       |
| BTF <sub>2</sub> _L <sub>3</sub>   | 13,062,185                      | 2145 (0.0164%)              | 273                         | 7.86                       |
| BTF <sub>3</sub> _L <sub>1</sub>   | 11,172,000                      | 660 (0.0059%)               | 222                         | 2.97                       |
| BTF <sub>3</sub> _L <sub>2</sub>   | 13,635,781                      | 1339 (0.0098%)              | 294                         | 4.55                       |
| BTF <sub>3</sub> _L <sub>3</sub>   | 14,100,552                      | 1439 (0.0102%)              | 318                         | 4.53                       |
| TBF <sub>1</sub> _L <sub>1</sub>   | 17,520,686                      | 1152 (0.0066%)              | 246                         | 4.68                       |
| TBF <sub>1</sub> _L <sub>2</sub>   | 8,130,930                       | 1984 (0.0244%)              | 234                         | 8.48                       |
| TBF <sub>1</sub> _L <sub>3</sub>   | 9,333,377                       | 1329 (0.0142%)              | 150                         | 8.86                       |
| TBF <sub>2</sub> _L <sub>1</sub>   | 16,434,403                      | 1451 (0.0088%)              | 283                         | 5.13                       |
| TBF <sub>2</sub> _L <sub>2</sub>   | 10,933,313                      | 1203 (0.011%)               | 244                         | 4.93                       |
| TBF <sub>2</sub> _L <sub>3</sub>   | 10,254,557                      | 1152 (0.0112%)              | 225                         | 5.12                       |
| TBF <sub>3</sub> _L <sub>1</sub>   | 19,475,294                      | 994 (0.0051%)               | 146                         | 6.81                       |
| TBF <sub>3</sub> _L <sub>2</sub>   | 28,579,348                      | 5711 (0.0200%)              | 467                         | 12.23                      |
| TBF <sub>3</sub> _L <sub>3</sub>   | 20,091,301                      | 3486 (0.0174%)              | 312                         | 11.17                      |
| BTF <sub>3</sub> _G <sub>1</sub>   | 8,891,290                       | 1566 (0.0176%)              | 682                         | 2.30                       |
| BTF <sub>3</sub> _G <sub>2</sub>   | 12,537,300                      | 3218 (0.0257%)              | 695                         | 4.63                       |
| BTF <sub>3</sub> _G <sub>3</sub>   | 11,921,918                      | 4902 (0.0411%)              | 925                         | 5.30                       |
| BTF <sub>3</sub> _M <sub>1</sub>   | 12,777,571                      | 525 (0.0041%)               | 209                         | 2.51                       |
| BTF <sub>3</sub> _M <sub>2</sub>   | 13,585,494                      | 577 (0.0042%)               | 145                         | 3.98                       |
| BTF <sub>3</sub> _M <sub>3</sub>   | 12,734,737                      | 930 (0.0073%)               | 269                         | 3.46                       |
| TBF <sub>3</sub> _G <sub>1</sub>   | 11,844,750                      | 460 (0.0039%)               | 145                         | 3.17                       |
| TBF <sub>3</sub> _G <sub>2</sub>   | 10,603,515                      | 2546 (0.0240%)              | 534                         | 4.77                       |
| TBF <sub>3</sub> _G <sub>3</sub>   | 13,803,894                      | 3248 (0.0235%)              | 577                         | 5.63                       |
| TBF <sub>3</sub> _M <sub>1</sub>   | 10,414,867                      | 348 (0.0033%)               | 158                         | 2.20                       |
| TBF <sub>3</sub> _M <sub>2</sub>   | 12,977,362                      | 1074 (0.0083%)              | 262                         | 4.10                       |
| TBF <sub>3</sub> _M <sub>3</sub>   | 12,357,505                      | 1065 (0.0086%)              | 277                         | 3.84                       |
| Total                              | 403,742,986                     | 67,446                      | /                           | /                          |
| Verification of recombinant events | /                               | 51,351                      | /                           | /                          |