

**Supplemental Table S1. Summary of sequencing data quality of WGS.**

| Samples      | Clean read  | Mappable read | Mappable rate | Unique mappable read | Unique mappable rate |
|--------------|-------------|---------------|---------------|----------------------|----------------------|
| WT           | 313,413,740 | 159,426,571   | 50.87%        | 138,607,047          | 44.22%               |
| <i>hybs1</i> | 25,3469,704 | 129,604,577   | 51.13%        | 112,041,382          | 44.20%               |
| <i>hybs2</i> | 301,546,568 | 153,282,539   | 50.83%        | 132,721,777          | 44.01%               |

**Supplemental Table S2. Summary of sequencing data quality of RNA-seq.**

| Samples            | Clean read | Mappable read | Mappable rate | Unique mappable read | Unique mappable rate |
|--------------------|------------|---------------|---------------|----------------------|----------------------|
| WT-rep1            | 17,860,760 | 16,054,203    | 89.88%        | 13,623,941           | 76.28%               |
| WT-rep2            | 16,183,301 | 14,406,000    | 89.02%        | 12,255,824           | 75.73%               |
| WT-rep3            | 16,740,358 | 15,099,427    | 90.20%        | 9,863,762            | 58.92%               |
| <i>hybs1</i> -rep1 | 17,659,640 | 15,708,883    | 88.95%        | 13,564,218           | 76.81%               |
| <i>hybs1</i> -rep2 | 15,391,380 | 13,870,371    | 90.12%        | 11,873,311           | 77.14%               |
| <i>hybs1</i> -rep3 | 15,026,450 | 13,545,867    | 90.15%        | 9,763,765            | 64.98%               |
| <i>hybs2</i> -rep1 | 16,740,479 | 15,240,943    | 91.04%        | 12,594,265           | 75.23%               |
| <i>hybs2</i> -rep2 | 17,464,470 | 15,862,356    | 90.83%        | 8,165,127            | 46.75%               |
| <i>hybs2</i> -rep3 | 15,124,890 | 13,416,457    | 88.70%        | 7,519,683            | 49.72%               |

**Supplemental Table S3. List of oligos and primer sequences used in this study.**

| Primer    | Sequence (5' to 3')                           | Assay |
|-----------|---|-------|
| TIF-134-3 | AAAAATATTTTTTTAGTTTAACTTAAAAAATAAGAAATTTA     | FISH  |
| TIF-165-3 | ATGCTTATGATAATTATGTGCGCATACTTTAATAGGTGCGATCAT | FISH  |
| TIF-185-1 | AAAAACCTAAGAAAACCATAGAAAATCCTA                | FISH  |

|                  |   |         |
|------------------|---|---------|
| <b>TIF-439</b>   | AGGGTTTTTCTAGGGTTTTTCTAGGGTTTTTCT                         | FISH    |
| <b>Ipa-1137</b>  | TGCAACGGAGGCTGGGTGACGTTGCAACGGAGGCTGGGTGACGT              | FISH    |
| <b>Ipa-1162</b>  | CCCAGCCTCCGTTGCAACGCGCCAGCCTCCGTTGCAACGCG                 | FISH    |
| <b>DP-1</b>      | TGCGATCATACCAGCACTAATGCACCGGATCCCGTCAGAACTCTGAAGTTAAGCGTG | FISH    |
| <b>DP-5</b>      | TTTAGGGTTTAGGGTTTAGGGTTTAGGGTTTAGGGTTTAGGGTTTAGGG         | FISH    |
| <b>J9EPM7-F1</b> | CCCCAATCCTTTGCACAACA                                      | qPCR-RT |
| <b>J9EPM7-R1</b> | TTGTTCCCATTTGGTGCCATG                                     | qPCR-RT |
| <b>5UX7QI-F1</b> | GTGGTTTCAATGCCGCCTTA                                      | qPCR-RT |
| <b>5UX7QI-R1</b> | CTCAACATGCCAGTGTCAACC                                     | qPCR-RT |
| <b>M4RITN-F1</b> | ATGGGAGCACGGGATATCTG                                      | qPCR-RT |
| <b>M4RITN-R1</b> | GTAACCCGCTCACAACATCC                                      | qPCR-RT |
| <b>FHX76J-F1</b> | TGCTGGAATTGCTGCTTTCA                                      | qPCR-RT |
| <b>FHX76J-R1</b> | TCTTGCAGGCACCATTTTGA                                      | qPCR-RT |
| <b>TMG43S-F1</b> | CCAAGAGTTACGAGGCATGC                                      | qPCR-RT |
| <b>TMG43S-R1</b> | GCGAATGTCTTGTACGGCTT                                      | qPCR-RT |
| <b>CDPA7L-F1</b> | TCTGTACTTCCCAATTCCTACC                                    | qPCR-RT |
| <b>CDPA7L-R1</b> | CCCTTGAAGTGTAGCTCCTTCT                                    | qPCR-RT |
| <b>TMG43S-F2</b> | AATAAACCGTAACCGCACCC                                      | Sanger  |
| <b>TMG43S-R2</b> | ACTGTGCGAATGTCTTGTGC                                      | Sanger  |
| <b>CDPA7L-F2</b> | CCTTTACATGACATCAAACCTGG                                   | Sanger  |
| <b>CDPA7L-R2</b> | CCCCTTGAAGTGTAGCTCCT                                      | Sanger  |

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