**Table S1.** Model-based groups and origin of the 187 accessions analyzed in this study A**.**

|  |  |  |  |
| --- | --- | --- | --- |
| Accession Name | IRGC/ IRTP/ IRIS GID number | Country | Model-based groupB |
| Kalamkati | IRIS GID 257290 | India | AU |
| Dular | IRGC 32561 | India | AU |
| N-22 | IRGC 4819 | India | AU |
| FR13A | IRGC 6144 | India | AU |
| BORMAI | IRGC 64770 | Bangladesh | AU |
| KARIA | IRGC 6702 | India | AU |
| BG-79 | IRGC 6704 | Guyana | AU |
| TINE-NISABA | IRGC 67796 | Myanmar | AU |
| Rayada | IRGC 77210 | Bangladesh | AU |
| IR60080-46A | IRIS GID 90768 | IRRI | JA |
| IR68552-100-1-2-2 | IRIS GID 204132 | IRRI | JA |
| IRAT-112 | IRIS GID 383601 | Ivory Coast | JA |
| Tainung-67 | IRIS GID 409507 | Taiwan | JA |
| WAB880-1-32-1-1-P2-HB | IRIS GID 1268588 | Warda | JA |
| WAB891SG33 | IRIS GID 1282620 | Warda | JA |
| WAB450-11-1-P41-3-HB | IRIS GID 1315046 | Warda | JA |
| IR76569-122-1-1-3 | IRIS GID 1319812 | IRRI | JA |
| WAB878-6-20-1-4-P1-HB | IRIS GID 1326479 | Warda | JA |
| Moroberekan | IRGC 12048 | Guinea | JA |
| Dom-sofid | IRGC 12880 | Iran | JA |
| DAMSIAH | IRGC 32290 | Iran | JA |
| TAREM | IRGC 32359 | Iran | JA |
| Azucena | IRGC 328 | Philippines | JA |
| SAIGOROT | IRGC 44727 | Philippines | JA |
| CAMORO | IRGC 47088 | Philippines | JA |
| PADIMONCAH | IRGC 54279 | Indonesia | JA |
| Li-Jiang-Xin-Tuan-Hei-Gu | IRGC 59323 | China | JA |
| Cypress | IRTP 19532 | USA | JA |
| BINAKA |  | Philippines | JA |
| IR36 | IRIS GID 11105 | IRRI | LL |
| MAHSURI | IRIS GID 12517 | Malaysia | LL |
| IR46 | IRIS GID 13064 | IRRI | LL |
| PSB Rc2 | IRIS GID 73006 | IRRI | LL |
| PSB-Rc18 | IRIS GID 82290 | Philippines | LL |
| PSB-Rc68 | IRIS GID 86586 | IRRI | LL |
| IR49830-7-1-2-3 | IRIS GID 88474 | IRRI | LL |
| IR43070-UBN501-2-1-1-1 | IRIS GID 89699 | IRRI | LL |
| PSB-Rc14 | IRIS GID 93180 | Philippines | LL |
| PSB-Rc82 | IRIS GID 94801 | Philippines | LL |
| IR15529-253-3-2-2-2 | IRIS GID 98932 | IRRI | LL |
| IR65610-105-2-5-2-2-2 | IRIS GID 160810 | IRRI | LL |
| IR66295-36-2 | IRIS GID 161901 | IRRI | LL |
| IR67039-115-3-1 | IRIS GID 162356 | IRRI | LL |
| IR67423-53-2-3-3-2 | IRIS GID 163270 | IRRI | LL |
| IR70177-76-1-1-3 | IRIS GID 204348 | IRRI | LL |
| BASMATI-370 | IRIS GID 303724 | Indonesia | LL |
| IET-2233 | IRIS GID 384568 | India | LL |
| Lalmati | IRIS GID 393567 | India | LL |
| BR31 | IRIS GID 403805 | Bangladesh | LL |
| KARJAT-3 | IRIS GID 403867 | India | LL |
| B2983B-SR-85-3-2-4 | IRIS GID 414452 | Indonesia | LL |
| ITA-249-(TOX711-17-9) | IRIS GID 416374 | Nigeria | LL |
| IR72 | IRIS GID 433773 | IRRI | LL |
| IR71700-247-1-1-2 | IRIS GID 462373 | IRRI | LL |
| IR69715-123-1-3 | IRIS GID 497756 | IRRI | LL |
| IR71143-223-3-2-2-3 | IRIS GID 500335 | IRRI | LL |
| IR72862-27-3-2-3 | IRIS GID 622177 | IRRI | LL |
| IR69507-18-SRN1-UBN1-4-4-1 | IRIS GID 674704 | IRRI | LL |
| IR70844-80-1-B-2 | IRIS GID 675237 | IRRI | LL |
| IR70213-10-CPA4-2-2-2 | IRIS GID 675263 | IRRI | LL |
| YN2484-507-21 | IRIS GID 687149 | Myanmar | LL |
| BR5969-3-2 | IRIS GID 707467 | Bangladesh | LL |
| IR74052-288-2-2 | IRIS GID 735371 | IRRI | LL |
| **Table S1.** *continued* |  |  |  |
| Accession Name | IRGC/ IRTP/ IRIS GID number | Country | Model-based groupB |
| PSB-Rc70 | IRIS GID 786287 | IRRI | LL |
| IR77186-122-2-2-3 | IRIS GID 1111266 | IRRI | LL |
| IR77512-111-2-1-2 | IRIS GID 1134428 | IRRI | LL |
| IR78533-30-2-1 | IRIS GID 1181619 | IRRI | LL |
| IR77701-129-1-1-2-2 | IRIS GID 1182620 | IRRI | LL |
| IR77080-B-34-3 | IRIS GID 1192189 | IRRI | LL |
| IR77084-B-4-3-3 | IRIS GID 1193032 | IRRI | LL |
| IR77073-B-35-1-1 | IRIS GID 1193036 | IRRI | LL |
| IR72022-46-2-3-3-2 | IRIS GID 1193040 | IRRI | LL |
| IR74590-67-1-1-3-1 | IRIS GID 1193562 | IRRI | LL |
| IR78128-67-3-1-2 | IRIS GID 1200028 | IRRI | LL |
| IR78029-7-2-3-3 | IRIS GID 1200819 | IRRI | LL |
| IR77724-8-2-3-2-2 | IRIS GID 1201057 | IRRI | LL |
| IR77498-127-3-2-3-2 | IRIS GID 1201258 | IRRI | LL |
| IR77494-3-1-5-2-3 | IRIS GID 1201275 | IRRI | LL |
| IR77490-4-2-2-2-2 | IRIS GID 1201288 | IRRI | LL |
| IR77519-40-2-2-2-3 | IRIS GID 1201857 | IRRI | LL |
| BP225D-TB-21-B | IRIS GID 1268606 | Indonesia | LL |
| BP222E-MR-3 | IRIS GID 1315096 | Indonesia | LL |
| BP223E-MR-8 | IRIS GID 1315103 | Indonesia | LL |
| B9563E-TB-12 | IRIS GID 1315113 | Indonesia | LL |
| B9071F-TB-7 | IRIS GID 1315117 | Indonesia | LL |
| BP233E-MR-4 | IRIS GID 1315121 | Indonesia | LL |
| BP238E-MR-10 | IRIS GID 1315126 | Indonesia | LL |
| BP230E-MR-3 | IRIS GID 1315127 | Indonesia | LL |
| BP232E-MR-8 | IRIS GID 1315128 | Indonesia | LL |
| BP241D-TB-18-6 | IRIS GID 1317684 | Indonesia | LL |
| IR78871-172-2-1-2 | IRIS GID 1319602 | IRRI | LL |
| IR70215-70-CPA-3-4-1-3 | IRIS GID 1324722 | IRRI | LL |
| BP228E-MR-9 | IRIS GID 1356362 | Indonesia | LL |
| BIO528-B-12-4 | IRIS GID 1356754 | Indonesia | LL |
| BIO530A-22-1-9-3 | IRIS GID 1356946 | Indonesia | LL |
| TB166E-TB-10-P-1 | IRIS GID 1356947 |  | LL |
| IR79906-B-5-3-3 | IRIS GID 1635949 | IRRI | LL |
| PSB Rc80 | IRIS GID 1846426 | IRRI | LL |
| BR4363-3-8-1-2-4 | IRIS GID 1876013 | Bangladesh | LL |
| IR78978-B-22-B-B-B | IRIS GID 1959884 | IRRI | LL |
| IR78933-B-24-B-B-1 | IRIS GID 1981840 | IRRI | LL |
| IR77298-5-6-18 | IRIS GID 2154104 | IRRI | LL |
| IR81428-B-15 | IRIS GID 2287857 | IRRI | LL |
| Minghui-63 | IRIS GID 2398465 | China | LL |
| Zhenshan-97B | IRIS GID 2398466 | China | LL |
| PR26850-PJ18-B-8 | IRIS GID 2398497 | Philippines | LL |
| PR23709-10 | IRIS GID 2398505 | Philippines | LL |
| PR26645-B-7 | IRIS GID 2398514 | Philippines | LL |
| PR28673-PJ21-2-1 | IRIS GID 2398519 | Philippines | LL |
| PR23813-1-1-1 | IRIS GID 2398520 | Philippines | LL |
| PR27843-2B-20-PJ23 | IRIS GID 2398524 | Philippines | LL |
| PR30876-15-1-1-PJ29 | IRIS GID 2398526 | Philippines | LL |
| Raeline-3 | IRIS GID 2885950 | Philippines | LL |
| Raeline-4 | IRIS GID 2885951 | Philippines | LL |
| INTOK | IRGC 11853 | Laos | LL |
| Sadu-Cho | IRGC 2243 | Korea | LL |
| MALAYA | IRGC 43469 | Indonesia | LL |
| REMAJA | IRGC 43572 | Indonesia | LL |
| SILIMUT | IRGC 43621 | Indonesia | LL |
| WAGWAG-LOS-BAÑOS | IRGC 44803 | Philippines | LL |
| KETAN-JARUM | IRGC 48728 | Indonesia | LL |
| BINONTON | IRGC 5171 | Philippines | LL |
| Salumpikit | IRGC 5423 | Philippines | LL |
| CHINOIS-6 | IRGC 56628 | Senegal | LL |
| IR64-21-(HLeung) | IRGC 66970 | IRRI | LL |
| CATAMPAL | IRGC 52888 | Philippines | LL |
| Swarna | IRTP 12715 | India | LL |
| IR62266-42-6-2 | IRTP 18979 | IRRI | LL |
| **Table S1.** *continued* |  |  |  |
| Accession Name | IRGC/ IRTP/ IRIS GID number | Country | Model-based groupB |
| Shan-Huang-Zhan-2 | IRTP 19808 | China | LL |
| Nam-Sagui-19 | IRTP 6892 | Thailand | LL |
| NSIC Rc280 |  | IRRI | LL |
| NSIC Rc288 |  | Philippines | LL |
| IR55419-04 | IRIS GID 146493 | IRRI | UL |
| TCA-80-4 | IRIS GID 167919 | India | UL |
| NSIC-Rc9 | IRIS GID 204538 | Philippines | UL |
| UPL-Ri5 | IRIS GID 406626 | Philippines | UL |
| UPL-Ri7 | IRIS GID 414456 | Philippines | UL |
| IR74371-70-1-1 | IRIS GID 1161409 | IRRI | UL |
| NSIC-Rc192 | IRIS GID 1161411 | Philippines | UL |
| IR79966-B2-52-2 | IRIS GID 1314724 | IRRI | UL |
| IR78875-131-B-1-1 | IRIS GID 1319203 | IRRI | UL |
| IR78878-53-2-2-4 | IRIS GID 1319480 | IRRI | UL |
| IR80312-6-B-3-2-B | IRIS GID 1320705 | IRRI | UL |
| IR79915-B-83-4-3 | IRIS GID 1635918 | IRRI | UL |
| IR79899-B-179-2-3 | IRIS GID 1635964 | IRRI | UL |
| IR79894-B-9-2-2 | IRIS GID 1636271 | IRRI | UL |
| IR79896-B-147-4-1 | IRIS GID 1636396 | IRRI | UL |
| IR80013-B-141-4-1 | IRIS GID 1636475 | IRRI | UL |
| IR78985-B-13-B-B-B | IRIS GID 1940169 | IRRI | UL |
| IR78913-B-22-B-B-B | IRIS GID 1959877 | IRRI | UL |
| IR78943-B-13-B-B-B | IRIS GID 1959880 | IRRI | UL |
| IR78936-B-6-B-B-B | IRIS GID 1959882 | IRRI | UL |
| IR78944-B-8-B-B-B | IRIS GID 1959885 | IRRI | UL |
| IR78948-B-1-B-B-B | IRIS GID 1982033 | IRRI | UL |
| IR78937-B-20-B-B-3 | IRIS GID 1986087 | IRRI | UL |
| IR78994-B-18-B-B-B | IRIS GID 1986335 | IRRI | UL |
| IR78914-B-22-B-B-B | IRIS GID 1986344 | IRRI | UL |
| IR78939-B-9-B-B-B | IRIS GID 1986345 | IRRI | UL |
| IR78941-B-16-B-B-B | IRIS GID 1986348 | IRRI | UL |
| IR78961-B-24-B-B-B | IRIS GID 1986352 | IRRI | UL |
| IR78974-B-19-B-B-B | IRIS GID 1986353 | IRRI | UL |
| IR80315-49-B-B-4-B-B-B | IRIS GID 1986355 | IRRI | UL |
| IR78940-B-22-B-B-B-SB1 | IRIS GID 2034998 | IRRI | UL |
| IR78966-B-10-B-B-B-SB1 | IRIS GID 2035000 | IRRI | UL |
| IR78997-B-16-B-B-B-SB2 | IRIS GID 2035003 | IRRI | UL |
| LAILA | IRGC 43459 | Indonesia | UL |
| IR31442-1-503-1-2-1 | IRIS GID 66436 | IRRI | ADMIX |
| Vandana | IRIS GID 89864 | India | ADMIX |
| DULHABHOG | IRIS GID 96116 | Bangladesh | ADMIX |
| SAMBHA-MAHSURI | IRIS GID 1162264 | IRRI | ADMIX |
| BP278D-MR-4 | IRIS GID 1315104 | Indonesia | ADMIX |
| BP235D-TB-36-8 | IRIS GID 1317666 | Indonesia | ADMIX |
| IR78877-181-B-1-4 | IRIS GID 1318968 | IRRI | ADMIX |
| IR82810-407 | IRIS GID 1847271 | IRRI | ADMIX |
| IR78339-157-3-6-B-B | IRIS GID 1985789 | IRRI | ADMIX |
| IR78942-B-2-B-B-1 | IRIS GID 1986282 | IRRI | ADMIX |
| IR79008-B-11-B-B-1 | IRIS GID 1986285 | IRRI | ADMIX |
| IR78982-B-24-B-B-B | IRIS GID 1986337 | IRRI | ADMIX |
| IR78221-19-2-13-1-B-B-B | IRIS GID 2063310 | IRRI | ADMIX |
| IR81025-B-16-1 | IRIS GID 2287861 | IRRI | ADMIX |
| Pokkali | IRGC 108921 | India | ADMIX |
| Aday-Sel. | IRGC 177 | India | ADMIX |
| Aswina | IRGC 26289 | Bangladesh | ADMIX |
| PADI-SEMUT | IRGC 43518 | Indonesia | ADMIX |
| AMBOL | IRGC 52990 | Philippines | ADMIX |
| AMERICANA | IRGC 54133 | Indonesia | ADMIX |
| JAVA | IRGC 6708 |  | ADMIX |

A Accessions may be requested through the following: International Rice Genbank (IRRI) for accesions with IRGC number; International Network for the Genetic Evaluation of Rice (INGER) based at IRRI for accesions with IRTP and IRIS GID numbers.

B Legend: AU - *aus*, JA - *japonica*, LL - lowland-adapted *indica*, UL - upland-adapted *indica*, ADMIX - admixed ancestry.

**Table S2.**  SSR markers used for genotyping the DSP.

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Marker Name | Chromosome | Mb Position |  | Marker Name | Chromosome | Mb Position |  | Marker Name | Chromosome | Mb Position |
| RM495 | 1 | 0.2160 |  | RM7181 | 4 | 15.3878 |  | RM284 | 8 | 21.1423 |
| RM1 | 1 | 4.6358 |  | RM142 | 4 | 20.5189 |  | RM502 | 8 | 26.4921 |
| RM259 | 1 | 7.4456 |  | RM119 | 4 | 21.2426 |  | RM477 | 8 | 28.0752 |
| RM243 | 1 | 7.9707 |  | RM241 | 4 | 26.8574 |  | RM23654 | 9 | 0.1515 |
| RM581 | 1 | 9.1067 |  | RM17305 | 4 | 27.1057 |  | RM219 | 9 | 2.9250 |
| RM493 | 1 | 12.2801 |  | RM470 | 4 | 28.0904 |  | RM444 | 9 | 5.9250 |
| RM312 | 1 | 14.8908 |  | RM3217 | 4 | 30.1174 |  | RM23857 | 9 | 6.0474 |
| RM595 | 1 | 15.3055 |  | RM349 | 4 | 32.4994 |  | RM5515 | 9 | 7.1466 |
| RM446 | 1 | 21.1451 |  | RM124 | 4 | 34.7396 |  | RM5777 | 9 | 10.1278 |
| RM5 | 1 | 23.9713 |  | RM507 | 5 | 0.1027 |  | RM105 | 9 | 12.4969 |
| RM443 | 1 | 28.3394 |  | RM405 | 5 | 3.0734 |  | RM524 | 9 | 12.9242 |
| RM128 | 1 | 30.7377 |  | RM194 | 5 | 5.3298 |  | RM434 | 9 | 15.6626 |
| RM265 | 1 | 35.1966 |  | RM169 | 5 | 7.4979 |  | RM288 | 9 | 18.5627 |
| RM5389 | 1 | 35.7323 |  | RM249 | 5 | 10.7765 |  | RM107 | 9 | 20.0687 |
| RM104 | 1 | 40.1668 |  | RM18286 | 5 | 12.4357 |  | RM215 | 9 | 21.1891 |
| RM8136 | 1 | 42.9261 |  | RM509 | 5 | 16.3246 |  | RM7492 | 10 | 0.0537 |
| RM12300 | 2 | 0.0490 |  | RM440 | 5 | 19.9125 |  | RM474 | 10 | 1.8188 |
| RM109 | 2 | 0.1833 |  | RM305 | 5 | 20.9443 |  | RM216 | 10 | 5.3528 |
| RM485 | 2 | 0.9343 |  | RM188 | 5 | 22.6712 |  | RM25121 | 10 | 6.4386 |
| RM12460 | 2 | 2.6337 |  | RM178 | 5 | 25.1018 |  | RM7417 | 10 | 6.9564 |
| RM12511 | 2 | 3.5418 |  | RM26 | 5 | 27.3420 |  | RM311 | 10 | 9.7474 |
| RM555 | 2 | 4.3057 |  | RM435 | 6 | 0.5373 |  | RM25245 | 10 | 10.5732 |
| RM1347 | 2 | 5.3142 |  | RM111 | 6 | 5.0967 |  | RM25267 | 10 | 10.9816 |
| RM174 | 2 | 7.0061 |  | RM276 | 6 | 6.2300 |  | RM6142 | 10 | 12.8020 |
| RM452 | 2 | 9.5633 |  | RM19621 | 6 | 6.2300 |  | RM184 | 10 | 16.3589 |
| RM301 | 2 | 12.2165 |  | RM564 | 6 | 11.7672 |  | RM25639 | 10 | 18.6558 |
| RM6374 | 2 | 15.1820 |  | RM3183 | 6 | 12.4470 |  | RM228 | 10 | 22.2432 |
| RM1379 | 2 | 20.0506 |  | RM2229 | 6 | 15.5786 |  | RM181 | 11 | 0.2020 |
| RM13500 | 2 | 22.2530 |  | RM20136 | 6 | 19.2061 |  | RM552 | 11 | 4.8430 |
| RM263 | 2 | 25.8653 |  | RM6036 | 6 | 21.5484 |  | RM441 | 11 | 6.0811 |
| RM573 | 2 | 27.9408 |  | RM162 | 6 | 24.0355 |  | RM1206 | 11 | 9.7618 |
| RM6 | 2 | 29.5798 |  | RM30 | 6 | 27.2523 |  | RM26547 | 11 | 12.0469 |
| RM530 | 2 | 30.5322 |  | RM461 | 6 | 30.1135 |  | RM287 | 11 | 16.7673 |
| RM112 | 2 | 32.0138 |  | RM192 | 7 | 0.2588 |  | RM26801 | 11 | 18.1126 |
| RM208 | 2 | 35.1358 |  | RM1243 | 7 | 3.5546 |  | RM206 | 11 | 22.0147 |
| RM523 | 3 | 1.3195 |  | RM180 | 7 | 5.7352 |  | RM27191 | 11 | 25.4304 |
| RM489 | 3 | 4.3337 |  | RM5436 | 7 | 9.0747 |  | RM144 | 11 | 28.2817 |
| RM546 | 3 | 6.1631 |  | RM542 | 7 | 12.7120 |  | RM20 | 12 | 0.9705 |
| RM563 | 3 | 11.0707 |  | RM445 | 7 | 17.4623 |  | RM558 | 12 | 1.6088 |
| RM282 | 3 | 12.4074 |  | RM11 | 7 | 19.2569 |  | RM247 | 12 | 3.1855 |
| RM338 | 3 | 13.2215 |  | RM21791 | 7 | 21.8187 |  | RM19 | 12 | 5.2250 |
| RM15254 | 3 | 18.1589 |  | RM6152 | 7 | 22.1275 |  | RM512 | 12 | 5.1043 |
| RM6392 | 3 | 20.4564 |  | RM455 | 7 | 22.3506 |  | RM27746 | 12 | 6.1356 |
| RM411 | 3 | 21.4292 |  | RM3589 | 7 | 25.1071 |  | RM101 | 12 | 8.8266 |
| RM3601 | 3 | 25.9577 |  | RM248 | 7 | 29.3398 |  | RM5939 | 12 | 10.0647 |
| RM135 | 3 | 27.4117 |  | RM407 | 8 | 0.5224 |  | RM28048 | 12 | 14.1065 |
| RM520 | 3 | 30.9127 |  | RM544 | 8 | 5.1082 |  | RM28130 | 12 | 16.7002 |
| RM468 | 3 | 32.6749 |  | RM547 | 8 | 5.5861 |  | RM511 | 12 | 17.3955 |
| RM514 | 3 | 35.2812 |  | RM22554 | 8 | 5.5861 |  | RM1261 | 12 | 17.5311 |
| RM16250 | 3 | 36.3744 |  | RM3644 | 8 | 6.2049 |  | RM28166 | 12 | 17.6077 |
| RM335 | 4 | 0.6884 |  | RM7267 | 8 | 10.1815 |  | RM277 | 12 | 18.2861 |
| RM3658 | 4 | 5.6042 |  | RM331 | 8 | 12.2941 |  | RM1986 | 12 | 21.2130 |
| RM261 | 4 | 6.5744 |  | RM3383 | 8 | 13.4835 |  | RM309 | 12 | 21.4546 |
| RM16575 | 4 | 10.0213 |  | RM7027 | 8 | 15.8449 |  | RM5715 | 12 | 25.0003 |
| RM5775 | 4 | 12.4390 |  | RM223 | 8 | 20.6501 |  | RM235 | 12 | 26.1079 |

**Table S3.**  RiceOPA3.1 SNP set used for genotyping the DSP.

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Marker Name | Chromosome | Mb Position |  | Marker Name | Chromosome | Mb Position |  | Marker Name | Chromosome | Mb Position |
| id1000259 | 1 | 0.4819 |  | ud2001198 | 2 | 21.9539 |  | id4002348 | 4 | 5.5189 |
| id1001102 | 1 | 1.2017 |  | id2008501 | 2 | 22.0343 |  | id4002718 | 4 | 7.0010 |
| id1001764 | 1 | 2.2582 |  | id2009229 | 2 | 23.9731 |  | id4002942 | 4 | 8.2103 |
| id1003056 | 1 | 3.7113 |  | id2009320 | 2 | 24.1151 |  | wd4001035 | 4 | 9.5521 |
| id1003344 | 1 | 4.0049 |  | id2010818 | 2 | 25.8590 |  | ud4000703 | 4 | 10.6743 |
| id1004256 | 1 | 5.3329 |  | id2011139 | 2 | 26.4766 |  | id4003524 | 4 | 11.1076 |
| wd1000235 | 1 | 6.6207 |  | id2011890 | 2 | 27.9493 |  | id4003793 | 4 | 12.2931 |
| id1005511 | 1 | 7.1794 |  | id2012032 | 2 | 28.2544 |  | wd4001906 | 4 | 13.0028 |
| id1006298 | 1 | 8.1965 |  | id2012493 | 2 | 29.6202 |  | id4004185 | 4 | 14.1879 |
| id1007185 | 1 | 9.6705 |  | fd12 | 2 | 29.7827 |  | id4004428 | 4 | 15.9447 |
| id1007562 | 1 | 10.3619 |  | id2013214 | 2 | 30.7646 |  | wd4002307 | 4 | 16.0430 |
| id1008171 | 1 | 11.6704 |  | ud2001837 | 2 | 31.8522 |  | id4004914 | 4 | 17.2365 |
| id1008693 | 1 | 12.8758 |  | id2013897 | 2 | 32.0506 |  | id4005404 | 4 | 18.7640 |
| ud1000597 | 1 | 13.4457 |  | id2014608 | 2 | 33.7193 |  | id4005704 | 4 | 19.6246 |
| id1009998 | 1 | 15.4140 |  | id2014833 | 2 | 34.3002 |  | ud4001552 | 4 | 20.6179 |
| ud1000744 | 1 | 16.3889 |  | id2015361 | 2 | 35.1871 |  | id4006867 | 4 | 21.3643 |
| id1010543 | 1 | 18.9345 |  | id2016199 | 2 | 36.1993 |  | id4007490 | 4 | 22.9647 |
| id1010652 | 1 | 19.2643 |  | id3000362 | 3 | 0.7001 |  | id4007698 | 4 | 23.6893 |
| id1011513 | 1 | 20.9029 |  | id3000695 | 3 | 1.0862 |  | id4007882 | 4 | 24.2792 |
| id1011563 | 1 | 21.0053 |  | fd9 | 3 | 1.2493 |  | id4008442 | 4 | 25.7140 |
| id1012165 | 1 | 22.8599 |  | id3001422 | 3 | 2.5728 |  | id4008536 | 4 | 26.4412 |
| id1012330 | 1 | 23.4520 |  | id3002191 | 3 | 3.9833 |  | id4008981 | 4 | 27.8548 |
| id1013183 | 1 | 24.6443 |  | id3002476 | 3 | 4.3207 |  | id4009413 | 4 | 28.9615 |
| id1013561 | 1 | 25.2393 |  | id3003491 | 3 | 5.9364 |  | id4009823 | 4 | 29.9143 |
| id1014752 | 1 | 26.4142 |  | id3003795 | 3 | 6.7072 |  | id4010200 | 4 | 30.6693 |
| id1015417 | 1 | 28.0949 |  | id3004040 | 3 | 7.5230 |  | id4010401 | 4 | 31.1951 |
| id1015984 | 1 | 29.3815 |  | id3004399 | 3 | 8.3813 |  | id4011666 | 4 | 33.9332 |
| id1016790 | 1 | 30.3494 |  | id3005111 | 3 | 9.8475 |  | id4011935 | 4 | 34.8770 |
| id1017859 | 1 | 31.7219 |  | id3005194 | 3 | 10.0524 |  | id4012501 | 4 | 35.8157 |
| id1018311 | 1 | 32.2099 |  | id3005824 | 3 | 11.1806 |  | id5000043 | 5 | 0.0800 |
| id1018329 | 1 | 32.2188 |  | id3006542 | 3 | 12.7461 |  | id5000811 | 5 | 1.1442 |
| id1018870 | 1 | 33.0635 |  | id3006872 | 3 | 13.3539 |  | id5001423 | 5 | 2.4281 |
| id1020384 | 1 | 34.6543 |  | id3006941 | 3 | 14.2924 |  | id5002154 | 5 | 3.6585 |
| id1020809 | 1 | 35.1223 |  | id3007541 | 3 | 15.5521 |  | id5002497 | 5 | 4.7151 |
| id1021494 | 1 | 36.3035 |  | id3007910 | 3 | 16.2995 |  | id5002987 | 5 | 5.8930 |
| id1022407 | 1 | 37.2980 |  | id3200001 | 3 | 16.6882 |  | id5003303 | 5 | 6.5682 |
| id1023174 | 1 | 38.2418 |  | id3008386 | 3 | 17.5876 |  | id5004086 | 5 | 8.0107 |
| id1024271 | 1 | 39.9843 |  | id3008660 | 3 | 18.3776 |  | wd5000945 | 5 | 9.5359 |
| id1024323 | 1 | 40.0171 |  | id3009175 | 3 | 19.4252 |  | id5004832 | 5 | 10.5444 |
| id1025455 | 1 | 41.7498 |  | id3009433 | 3 | 20.6226 |  | id5004982 | 5 | 11.3290 |
| id1026052 | 1 | 42.6759 |  | id3009800 | 3 | 21.7640 |  | wd5001818 | 5 | 12.6409 |
| id1026613 | 1 | 43.0763 |  | id3010055 | 3 | 22.2339 |  | ud5000604 | 5 | 13.3112 |
| dd1002041 | 1 | 44.3378 |  | id3010557 | 3 | 23.7755 |  | id5005882 | 5 | 14.3367 |
| id2000007 | 2 | 0.0096 |  | id3010700 | 3 | 24.2544 |  | id5006365 | 5 | 15.9761 |
| wd2000006 | 2 | 1.4751 |  | id3010849 | 3 | 25.1727 |  | id5006456 | 5 | 16.1631 |
| id2001468 | 2 | 2.4109 |  | id3011095 | 3 | 26.7538 |  | id5007205 | 5 | 17.9361 |
| id2002293 | 2 | 4.3615 |  | id3011400 | 3 | 27.8562 |  | id5008218 | 5 | 19.9685 |
| id2003067 | 2 | 5.8370 |  | id3013076 | 3 | 28.8875 |  | id5008667 | 5 | 20.7313 |
| id2003244 | 2 | 6.2865 |  | id3013192 | 3 | 29.0308 |  | id5009149 | 5 | 21.6666 |
| ud2000373 | 2 | 7.2785 |  | id3013308 | 3 | 29.2367 |  | id5009967 | 5 | 22.7002 |
| wd2000377 | 2 | 8.0040 |  | id3014066 | 3 | 30.6345 |  | id5010886 | 5 | 24.0721 |
| id2004617 | 2 | 9.5822 |  | id3014361 | 3 | 31.0853 |  | id5011771 | 5 | 25.2768 |
| wd2000539 | 2 | 10.3010 |  | fd10 | 3 | 32.3632 |  | id5012326 | 5 | 26.0120 |
| id2005345 | 2 | 11.4457 |  | id3015453 | 3 | 32.9341 |  | id5013450 | 5 | 27.6444 |
| id2005538 | 2 | 12.1834 |  | id3015533 | 3 | 33.0212 |  | id5013798 | 5 | 28.1479 |
| id2005746 | 2 | 13.0428 |  | id3016090 | 3 | 34.1282 |  | id5014669 | 5 | 29.1795 |
| ud2000761 | 2 | 14.9426 |  | id3016979 | 3 | 35.4607 |  | id6000073 | 6 | 0.2433 |
| wd2001405 | 2 | 15.8382 |  | id3017777 | 3 | 36.5110 |  | fd7 | 6 | 1.7648 |
| wd2001525 | 2 | 16.2604 |  | id4000001 | 4 | 0.0505 |  | fd8 | 6 | 1.7670 |
| wd2001664 | 2 | 17.9490 |  | id4001096 | 4 | 2.4486 |  | id6002123 | 6 | 2.7826 |
| id2007273 | 2 | 19.1313 |  | wd4000347 | 4 | 3.2944 |  | fd13 | 6 | 3.0813 |
| id2007679 | 2 | 20.5645 |  | id4002032 | 4 | 4.7411 |  | id6002611 | 6 | 3.2435 |

**Table S3.***continued*

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Marker Name | Chromosome | Mb Position |  | Marker Name | Chromosome | Mb Position |  | Marker Name | Chromosome | Mb Position |
| id6003088 | 6 | 4.0992 |  | id8002025 | 8 | 5.8462 |  | id10005049 | 10 | 18.0729 |
| id6003705 | 6 | 5.8446 |  | id8002187 | 8 | 6.2280 |  | wd10003790 | 10 | 19.8756 |
| id6004020 | 6 | 6.2845 |  | ud8000441 | 8 | 7.6505 |  | id10006340 | 10 | 20.4856 |
| fd17 | 6 | 6.7514 |  | wd8001250 | 8 | 8.4247 |  | ud10001209 | 10 | 21.5721 |
| id6004563 | 6 | 7.0967 |  | id8002968 | 8 | 9.2016 |  | id10006861 | 10 | 22.2251 |
| id6005608 | 6 | 8.7258 |  | id8003469 | 8 | 10.9021 |  | id10007384 | 10 | 23.6490 |
| id6006214 | 6 | 9.8354 |  | id8003624 | 8 | 11.9635 |  | id11000133 | 11 | 0.6817 |
| id6006537 | 6 | 10.5507 |  | wd8002051 | 8 | 12.2670 |  | id11000343 | 11 | 1.3986 |
| id6007220 | 6 | 11.4456 |  | wd8002449 | 8 | 13.8012 |  | id11000807 | 11 | 2.5522 |
| ud6000539 | 6 | 12.1361 |  | id8003833 | 8 | 14.1461 |  | id11001552 | 11 | 3.9402 |
| id6008330 | 6 | 13.9109 |  | id8004221 | 8 | 15.7022 |  | id11001601 | 11 | 4.0629 |
| wd6001924 | 6 | 15.3685 |  | wd8002912 | 8 | 16.2531 |  | id11002336 | 11 | 5.5725 |
| id6009217 | 6 | 16.9013 |  | id8004775 | 8 | 17.9936 |  | id11002690 | 11 | 6.2797 |
| id6009470 | 6 | 17.5275 |  | id8004948 | 8 | 18.7642 |  | id11002906 | 11 | 7.2032 |
| id6009699 | 6 | 18.0666 |  | id8005235 | 8 | 19.6999 |  | id11003145 | 11 | 8.1679 |
| ud6000786 | 6 | 19.8033 |  | id8005688 | 8 | 20.8843 |  | wd11000649 | 11 | 9.6146 |
| id6010404 | 6 | 20.4813 |  | id8006359 | 8 | 22.1960 |  | id11003973 | 11 | 10.9584 |
| id6010766 | 6 | 21.5086 |  | id8006751 | 8 | 23.7408 |  | wd11001118 | 11 | 11.8215 |
| id6011379 | 6 | 22.5776 |  | ud8001618 | 8 | 24.8496 |  | id11004264 | 11 | 12.0836 |
| id6011555 | 6 | 23.1370 |  | id8006984 | 8 | 25.5853 |  | id11004341 | 11 | 14.8931 |
| id6012335 | 6 | 24.6977 |  | id8007093 | 8 | 26.0597 |  | id11004584 | 11 | 15.7426 |
| id6013038 | 6 | 25.3857 |  | id8007595 | 8 | 27.7327 |  | id11004845 | 11 | 16.6079 |
| id6014020 | 6 | 26.8813 |  | id8007764 | 8 | 27.9216 |  | id11005058 | 11 | 17.2718 |
| id6015002 | 6 | 27.6643 |  | id9000154 | 9 | 0.7494 |  | id11005515 | 11 | 18.0796 |
| id6016142 | 6 | 28.9388 |  | id9000339 | 9 | 1.2083 |  | id11006054 | 11 | 19.1590 |
| id6016264 | 6 | 29.3822 |  | id9000571 | 9 | 1.9338 |  | id11006537 | 11 | 20.2384 |
| id6016803 | 6 | 30.9705 |  | wd9000359 | 9 | 2.4813 |  | id11007108 | 11 | 21.1760 |
| id6016873 | 6 | 31.2245 |  | ud9000122 | 9 | 3.6453 |  | id11007805 | 11 | 22.5521 |
| id7000070 | 7 | 0.3542 |  | id9000821 | 9 | 4.0324 |  | id11008178 | 11 | 23.7547 |
| id7000183 | 7 | 1.0216 |  | id9001297 | 9 | 5.6664 |  | dd11000336 | 11 | 24.1231 |
| id7000448 | 7 | 2.5682 |  | wd9001098 | 9 | 7.6718 |  | id11008929 | 11 | 25.0156 |
| id7000479 | 7 | 3.3515 |  | id9002419 | 9 | 8.4616 |  | id11009635 | 11 | 26.7546 |
| id7000589 | 7 | 4.3920 |  | id9002551 | 9 | 9.1355 |  | id11010238 | 11 | 27.8044 |
| ud7000430 | 7 | 5.3749 |  | id9003030 | 9 | 11.4677 |  | id11010555 | 11 | 28.8274 |
| id7001091 | 7 | 6.8120 |  | id9003183 | 9 | 12.4535 |  | id11011652 | 11 | 30.7676 |
| id7001155 | 7 | 7.0198 |  | id9003598 | 9 | 13.6215 |  | id12000232 | 12 | 0.6621 |
| id7001559 | 7 | 8.5306 |  | id9003830 | 9 | 14.7368 |  | id12000633 | 12 | 1.4048 |
| id7001631 | 7 | 9.0387 |  | id9004148 | 9 | 15.5172 |  | id12001043 | 12 | 2.2357 |
| ud7000813 | 7 | 10.9588 |  | id9004978 | 9 | 16.9792 |  | id12001567 | 12 | 3.7456 |
| id7001998 | 7 | 11.5881 |  | id9005523 | 9 | 17.8668 |  | id12002113 | 12 | 4.6627 |
| id7002055 | 7 | 12.2702 |  | id9005626 | 9 | 18.0032 |  | id12002563 | 12 | 5.7649 |
| wd7001809 | 7 | 13.8319 |  | id9006953 | 9 | 19.9927 |  | id12002727 | 12 | 6.8141 |
| ud7000964 | 7 | 14.2586 |  | id9006968 | 9 | 20.0191 |  | id12003005 | 12 | 7.5983 |
| id7002392 | 7 | 15.6679 |  | id9007180 | 9 | 21.6664 |  | id12003717 | 12 | 9.1802 |
| id7002556 | 7 | 16.6763 |  | id9007328 | 9 | 22.2969 |  | id12004099 | 12 | 10.6070 |
| id7002701 | 7 | 17.5572 |  | id9007784 | 9 | 23.4325 |  | id12004460 | 12 | 12.3444 |
| ud7001174 | 7 | 18.0167 |  | id10000185 | 10 | 0.9075 |  | wd12001978 | 12 | 13.6886 |
| id7002931 | 7 | 19.3826 |  | ud10000050 | 10 | 1.0082 |  | id12005212 | 12 | 14.6385 |
| id7003172 | 7 | 20.7476 |  | id10000881 | 10 | 2.9952 |  | id12005547 | 12 | 15.9263 |
| id7003243 | 7 | 21.2854 |  | ud10000265 | 10 | 3.9629 |  | wd12003207 | 12 | 16.5125 |
| id7003591 | 7 | 22.4447 |  | id10001327 | 10 | 4.1627 |  | id12005992 | 12 | 17.8365 |
| id7004065 | 7 | 23.8077 |  | id10001970 | 10 | 5.9328 |  | id12006155 | 12 | 18.4604 |
| id7004210 | 7 | 24.1742 |  | id10002083 | 10 | 6.2233 |  | id12006339 | 12 | 19.0755 |
| id7004645 | 7 | 25.6826 |  | id10002364 | 10 | 7.0703 |  | id12006721 | 12 | 20.0686 |
| id7004870 | 7 | 26.3923 |  | wd10002013 | 10 | 8.9730 |  | wd12003998 | 12 | 21.0623 |
| id7005137 | 7 | 27.1367 |  | id10002542 | 10 | 9.2991 |  | id12007216 | 12 | 22.0470 |
| id7005423 | 7 | 28.2119 |  | id10002867 | 10 | 10.9594 |  | id12008289 | 12 | 23.9370 |
| id7005984 | 7 | 29.8467 |  | id10002916 | 10 | 11.2928 |  | id12008779 | 12 | 24.8394 |
| id8000140 | 8 | 0.4167 |  | id10003260 | 10 | 12.3707 |  | id12009089 | 12 | 25.3647 |
| id8000470 | 8 | 1.7089 |  | id10003706 | 10 | 14.6147 |  | id12009467 | 12 | 26.1495 |
| id8000754 | 8 | 2.3926 |  | id10003891 | 10 | 15.2396 |  | id12010130 | 12 | 27.6606 |
| id8001029 | 8 | 3.1666 |  | id10004500 | 10 | 16.5704 |  |  |  |  |
| id8001299 | 8 | 4.0453 |  | ud10000989 | 10 | 17.4079 |  |  |  |  |



**Figure S1.**  Plots of L(*k*) and Delta *k* for model-based inference of population structure based on SNP (top) and SSR (bottom) marker data. Error bars for L(*k*) are standard deviation from 10 replications.