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| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Supplementary Table 5: Frequency of Major alleles at SNP sites in high-low pools and subpopulations.** | | | | | | | | |
| Chr. | GWAS-QTL | Position | -LOG10(P) | Allele types | Major allele frequency in different populations | | | |
| High pool in ind. | Low pool in ind. | High pool in jap. | Low pool in jap. |
| 1 | *qTA1-1* | 21952887\* | 4.29 | C/T | 0.95 | 0.61 | 0.53 | 0.65 |
| 1 |  | 21954204 | 4.12 | A/G | 0.95 | 0.71 | 0.67 | 0.63 |
| 1 |  | 22126817ᵟ | 4.22 | C/T | 0.80 | 0.60 | 0.56 | 0.95 |
| 1 |  | 22127773ᵟ | 4.57 | C/T | 0.85 | 0.60 | 0.56 | 0.95 |
| 1 |  | 22268141 | 4.11 | A/C | 0.90 | 0.80 | 0.84 | 0.72 |
| 1 |  | 22378797 | 4.07 | C/T | 0.95 | 0.74 | 0.89 | 0.79 |
| 1 |  | 22379048 | 5.29 | C/T | 0.90 | 0.61 | 0.63 | 1.00 |
| 1 |  | 22383767 | 4.56 | A/C | 0.85 | 0.55 | 0.54 | 0.89 |
| 1 |  | 22384003 | 4.41 | A/G | 0.80 | 0.55 | 0.55 | 0.83 |
| 1 | *qTA1-2* | 24786440ᵟ | 4.13 | A/G | 0.80 | 0.60 | 1.00 | 0.95 |
| 1 |  | 24788280ᵟ | 4.25 | A/G | 0.80 | 0.58 | 1.00 | 0.95 |
| 1 |  | 24788684 | 4.38 | G/T | 0.85 | 0.55 | 0.94 | 0.70 |
| 1 |  | 24789800 | 4.06 | A/G | 0.65 | 0.58 | 1.00 | 0.83 |
| 1 |  | 24806709\* | 4.48 | A/C | 0.90 | 0.55 | 0.59 | 0.73 |
| 1 |  | 24809669 | 4.01 | A/C | 0.80 | 0.55 | 0.50 | 0.74 |
| 1 |  | 24813140 | 4.27 | C/G | 0.90 | 0.55 | 0.67 | 0.68 |
| 1 |  | 24813375 | 4.11 | A/C | 0.85 | 0.55 | 0.53 | 0.68 |
| 1 |  | 24813664 | 4.09 | G/T | 0.75 | 0.55 | 0.60 | 0.74 |
| 2 | *qTA2-1* | 869792 | 4.07 | C/G | 0.53 | 0.68 | 0.79 | 0.67 |
| 2 |  | 870392 | 4.31 | A/T | 0.53 | 0.68 | 0.71 | 0.71 |
| 2 | *qTA2-2* | 8699730ᵟ | 4.08 | A/G | 0.90 | 0.84 | 1.00 | 0.95 |
| 2 |  | 8709000 | 4.19 | A/G | 0.90 | 0.79 | 0.63 | 0.83 |
| 2 |  | 8709080 | 4.83 | A/G | 0.89 | 0.83 | 0.94 | 0.89 |
| 2 |  | 8709101 | 4.77 | G/T | 0.89 | 0.83 | 1.00 | 0.89 |
| 2 | *qTA2-5* | 18717183 | 4.05 | C/T | 0.80 | 0.65 | 0.63 | 0.65 |
| 2 |  | 18717275 | 4.03 | C/T | 0.80 | 0.65 | 0.63 | 0.65 |
| 2 |  | 18717777 | 4.19 | C/T | 0.75 | 0.53 | 0.50 | 0.72 |
| 2 |  | 18785862 | 4.34 | A/G | 0.89 | 0.72 | 0.86 | 0.65 |
| 2 |  | 18789028 | 5.61 | C/T | 0.83 | 0.56 | 0.50 | 0.67 |
| 2 | *qTA2-6* | 29229194 | 4.13 | C/G | 0.70 | 0.79 | 0.94 | 0.95 |
| 2 |  | 29266391 | 4.23 | C/T | 0.65 | 0.85 | 0.88 | 0.95 |
| 2 |  | 29293710 | 4.39 | C/T | 0.60 | 0.85 | 0.88 | 0.95 |
| 2 |  | 29318559 | 4.02 | A/C | 0.55 | 0.85 | 0.94 | 0.90 |
| 2 |  | 29407400 | 4.08 | C/T | 0.56 | 0.74 | 0.72 | 0.94 |
| 3 | *qTA3-1* | 25263068 | 4.31 | A/G | 0.70 | 0.72 | 0.50 | 0.79 |
| 3 |  | 25273455 | 4.54 | A/T | 0.82 | 0.56 | 0.72 | 0.81 |
| 3 | *qTA3-2* | 25422986 | 5.27 | A/G | 1.00 | 0.57 | 1.00 | 0.94 |
| 3 |  | 25423816 | 4.17 | A/T | 1.00 | 0.64 | 0.75 | 0.89 |
| 3 |  | 26264160\* | 4.07 | C/T | 0.95 | 0.65 | 0.81 | 0.90 |
| 3 |  | 26277587ᵟ | 4.23 | C/G | 0.95 | 0.67 | 1.00 | 0.95 |
| 3 |  | 26277666\* | 4.47 | A/G | 0.94 | 0.56 | 0.67 | 0.82 |
| 3 |  | 26313715\*ᵟ | 4.48 | A/G | 0.95 | 0.59 | 1.00 | 0.89 |
| 3 | *qTA3-3* | 33198645 | 4.04 | C/T | 0.50 | 0.75 | 0.68 | 0.95 |
| 3 |  | 33199574ᵟ | 4.36 | A/G | 0.55 | 0.80 | 1.00 | 0.95 |
| 3 | *qTA3-4* | 33199696 | 4.04 | A/T | 0.55 | 0.80 | 0.81 | 0.95 |
| 3 |  | 35861067 | 4.08 | C/G | 0.60 | 0.60 | 0.79 | 0.50 |
| 4 | *qTA4-1* | 656591\* | 4.01 | A/G | 0.90 | 0.50 | 0.64 | 0.58 |
| 4 |  | 723871\*ᵟ | 4.91 | A/G | 0.95 | 0.56 | 0.69 | 0.59 |
| 4 |  | 724006 | 4.47 | A/G | 0.95 | 0.88 | 1.00 | 1.00 |
| 4 | *qTA4-2* | 896483 | 4.00 | C/T | 0.95 | 0.87 | 1.00 | 1.00 |
| 4 |  | 913650 | 4.15 | C/T | 0.95 | 0.81 | 0.94 | 0.83 |
| 4 |  | 972323 | 4.23 | C/T | 0.76 | 0.75 | 0.71 | 0.87 |
| 4 |  | 972402 | 4.24 | A/G | 0.80 | 0.75 | 0.50 | 0.72 |
| 5 | *qTA5-1* | 17795916 | 5.01 | C/T | 0.93 | 0.87 | 0.88 | 0.89 |
| 5 |  | 17795918\* | 4.80 | C/G | 1.00 | 0.87 | 0.94 | 0.89 |
| 5 |  | 18061792 | 4.01 | C/T | 0.67 | 0.70 | 0.55 | 0.68 |
| 5 | *qTA5-2* | 18485378 | 4.20 | A/G | 0.90 | 0.80 | 0.86 | 1.00 |
| 5 |  | 18567409 | 4.02 | A/G | 0.90 | 0.80 | 0.86 | 1.00 |
| 5 |  | 18607726 | 4.11 | A/C | 0.89 | 0.67 | 0.54 | 0.67 |
| 5 |  | 18611109 | 4.15 | A/G | 0.70 | 0.55 | 0.55 | 0.79 |
| 5 |  | 18650208 | 4.14 | C/T | 0.74 | 0.50 | 0.54 | 0.74 |
| 5 |  | 18656208 | 4.16 | A/G | 0.82 | 0.53 | 0.56 | 0.68 |
| 5 |  | 18668045 | 4.73 | A/T | 0.70 | 0.60 | 0.81 | 0.80 |
| 5 |  | 18674793 | 4.06 | C/T | 0.83 | 0.65 | 0.81 | 0.94 |
| 5 |  | 18676549 | 4.14 | C/T | 0.65 | 0.60 | 0.63 | 0.75 |
| 5 |  | 18684943 | 4.16 | A/G | 0.80 | 0.55 | 0.50 | 0.74 |
| 5 | qTA5-3 | 19210385 | 4.03 | A/T | 0.75 | 0.60 | 0.76 | 0.80 |
| 6 | qTA6 | 26086998 | 4.07 | C/T | 0.80 | 0.60 | 0.54 | 0.75 |
| 6 |  | 26087025 | 4.35 | C/T | 0.76 | 0.67 | 0.57 | 0.79 |
| 6 |  | 26090822 | 4.13 | G/T | 0.95 | 0.68 | 0.91 | 0.67 |
| 6 |  | 26092647 | 4.15 | A/G | 0.79 | 0.50 | 0.55 | 0.74 |
| 6 |  | 26092691 | 4.33 | C/T | 0.82 | 0.53 | 0.52 | 0.67 |
| 6 |  | 26092692 | 4.52 | C/G | 0.82 | 0.53 | 0.69 | 0.67 |
| 6 |  | 26092695 | 4.38 | C/G | 0.82 | 0.53 | 0.69 | 0.67 |
| 8 | *qTA8-2* | 20806567 | 5.23 | C/T | 0.85 | 0.89 | 0.68 | 0.58 |
| 8 |  | 20995468ᵟ | 4.28 | C/T | 0.85 | 0.95 | 0.90 | 1.00 |
| 8 | *qTA8-3* | 28326881 | 4.00 | A/T | 0.58 | 0.58 | 0.73 | 0.89 |
| 8 |  | 28327637 | 4.38 | C/T | 0.50 | 0.58 | 0.65 | 0.84 |
| 9 | *qTA9-2* | 1478117 | 4.05 | A/T | 0.85 | 0.80 | 0.57 | 0.60 |
| 9 |  | 1495271 | 4.27 | A/G | 0.84 | 0.78 | 0.92 | 0.71 |
| 9 |  | 1506412 | 4.19 | A/T | 0.85 | 0.80 | 0.59 | 0.58 |
| 9 |  | 1703261 | 4.08 | C/T | 0.85 | 0.85 | 0.70 | 0.55 |
| 9 |  | 1739357 | 4.08 | C/T | 1.00 | 0.78 | 0.68 | 0.58 |
| 9 |  | 1978884 | 4.19 | A/G | 0.85 | 0.84 | 0.75 | 0.58 |
| 9 |  | 2070634 | 4.50 | A/C | 0.85 | 0.85 | 0.73 | 0.55 |
| 9 |  | 2146097 | 4.30 | C/T | 0.80 | 0.80 | 0.68 | 0.55 |
| 9 |  | 2207902 | 4.14 | A/G | 0.75 | 0.76 | 0.77 | 0.61 |
| 9 | *qTA9-3* | 2533331 | 4.04 | A/G | 0.85 | 0.75 | 0.77 | 0.60 |
| 9 | *qTA9-4* | 2936852 | 4.25 | C/T | 0.85 | 0.85 | 0.70 | 0.56 |
| 9 |  | 3030973 | 4.06 | A/G | 0.76 | 0.75 | 0.71 | 0.58 |
| 9 |  | 3180164 | 4.13 | C/T | 0.81 | 0.81 | 0.65 | 0.58 |
| 9 | *qTA9-6* | 20721611 | 4.29 | A/G | 0.80 | 0.60 | 0.87 | 0.68 |
| 9 |  | 20721612 | 4.28 | G/T | 0.85 | 0.55 | 0.85 | 0.68 |
| 9 |  | 20732073 | 4.05 | C/T | 0.85 | 0.55 | 0.50 | 0.68 |
| 9 |  | 20733643 | 4.02 | A/T | 0.80 | 0.60 | 0.64 | 0.70 |
| 9 |  | 20734345 | 4.01 | A/G | 0.80 | 0.60 | 0.88 | 0.70 |
| 9 |  | 20734901 | 4.02 | A/G | 0.85 | 0.55 | 0.60 | 0.70 |
| 9 |  | 20735698 | 4.01 | G/T | 0.85 | 0.50 | 0.86 | 0.70 |
| 9 |  | 20737825\* | 4.05 | C/T | 0.90 | 0.55 | 0.52 | 0.68 |
| 9 |  | 20749695 | 4.58 | C/T | 0.80 | 0.60 | 0.56 | 0.70 |
| 9 |  | 20749778 | 4.66 | A/G | 0.80 | 0.60 | 0.88 | 0.70 |
| 9 |  | 20749797 | 4.58 | A/G | 0.85 | 0.55 | 0.60 | 0.70 |
| 10 | *qTA10-1* | 14191834 | 4.39 | C/T | 0.70 | 0.72 | 0.69 | 0.63 |
| 10 |  | 14253982 | 4.37 | G/T | 0.75 | 0.68 | 0.69 | 0.63 |
| 10 |  | 14330396 | 5.00 | A/G | 0.71 | 0.88 | 0.64 | 0.63 |
| 10 |  | 14330471 | 4.01 | C/T | 0.80 | 0.81 | 0.77 | 0.65 |
| 10 |  | 14400913 | 4.27 | A/G | 0.75 | 0.85 | 0.86 | 1.00 |
| 10 |  | 14401393ᵟ | 4.09 | C/T | 0.85 | 0.95 | 0.95 | 1.00 |
| 10 |  | 14401462ᵟ | 4.36 | C/T | 0.79 | 0.95 | 0.95 | 1.00 |
| 10 |  | 14596751\* | 4.03 | A/G | 0.84 | 1.00 | 1.00 | 1.00 |
| 10 |  | 14733631 | 4.9 | C/G | 0.85 | 0.8 | 0.67 | 1.00 |
| 10 | qTA10-2 | 20273073 | 4.02 | C/T | 0.5 | 0.53 | 0.69 | 0.89 |
| 10 |  | 20295300 | 4.09 | C/T | 0.78 | 0.83 | 0.93 | 0.89 |
| 10 | qTA10-3 | 22781454 | 4.45 | C/T | 0.65 | 0.5 | 0.64 | 0.84 |
| 10 |  | 22785165 | 4.08 | A/G | 0.56 | 0.56 | 0.67 | 0.84 |
| 10 |  | 22785823 | 4.13 | A/G | 0.6 | 0.56 | 0.63 | 0.79 |
| 10 |  | 22786093 | 4.07 | A/G | 0.63 | 0.5 | 0.63 | 0.79 |
| 10 |  | 22786144\*ᵟ | 4 | C/G | 0.85 | 0.5 | 1 | 0.95 |
| 10 |  | 22794987 | 4.06 | C/T | 0.6 | 0.5 | 0.64 | 0.79 |
| 10 |  | 22824972 | 4.59 | C/T | 0.72 | 0.67 | 0.86 | 0.88 |
| 10 |  | 22825752 | 4.44 | C/T | 0.72 | 0.59 | 0.73 | 0.89 |
| 10 |  | 22830879 | 4.05 | C/T | 0.6 | 0.56 | 0.68 | 0.84 |
| 12 | qTA12-1 | 3258584 | 4.02 | C/T | 1 | 0.72 | 0.67 | 0.68 |
| 12 |  | 3261158\* | 4.13 | C/T | 1 | 0.85 | 0.72 | 0.65 |
| 12 |  | 3262149\* | 4.21 | C/T | 1 | 0.82 | 0.8 | 0.63 |
| 12 |  | 3279089 | 4.59 | C/T | 1 | 0.8 | 0.71 | 0.72 |
| 12 |  | 3303833\* | 4.11 | A/C | 1 | 0.84 | 0.7 | 0.7 |
| 12 |  | 3329842 | 4.66 | G/T | 1 | 0.79 | 0.75 | 0.7 |
| 12 |  | 3386449 | 4.37 | A/G | 1 | 0.8 | 0.86 | 0.63 |
| 12 |  | 3392736\* | 4.05 | C/T | 1 | 0.84 | 0.74 | 0.7 |
| 12 |  | 3454364\* | 4.05 | A/G | 1 | 0.84 | 0.86 | 0.68 |
| 12 |  | 3509703\* | 4 | A/G | 1 | 0.84 | 0.87 | 0.7 |
| 12 |  | 3522558 | 4.04 | A/G | 1 | 0.75 | 0.87 | 0.7 |
| 12 |  | 3529032\* | 4.07 | C/T | 1 | 0.89 | 0.71 | 0.68 |
| 12 | qTA12-3 | 9736891 | 4.63 | A/T | 0.54 | 0.75 | 0.76 | 0.89 |
| 12 |  | 9755631 | 4.07 | C/T | 1 | 0.8 | 0.67 | 0.58 |
| 12 | qTA12-4 | 21851124 | 4.13 | C/T | 0.56 | 0.84 | 0.87 | 0.95 |
| 12 |  | 22047563 | 4.22 | A/G | 0.75 | 0.68 | 0.71 | 0.95 |
|  | \*: At <0.05According to χ2- test, the major and minor allele frequencies between of indica high & low pools are significantly different | | | | | | | |
|  | ᵟ: According to χ2- test, the major and minor allele frequencies between of Japonica high & low pools are significantly different | | | | | | | |