**Table S2.** The average and range values of root architectural traits of K/Z RIL population under ABA conditions

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Traits | Treatments | Kaybonnet | ZHE733 | K/Z RIL Population |
| **Average** | **Range** |
| Root length (cm) | ABA 0 µM | 6.570 | 4.611 | 4.428 | 0.500 - 8.933 |
| ABA 3 µM | 2.500 | 3.800 | 3.600 | 0.094 - 8.651 |
| ABA 5 µM | 2.050 | 3.678 | 3.491 | 0.100 - 8.367 |
| Root to shoot ratio | ABA 0 µM | 0.363 | 0.324 | 0.259 | 0.079 - 0.669 |
| ABA 3 µM | 0.587 | 0.303 | 0.336 | 0.013 - 1.216 |
| ABA 5 µM | 0.432 | 0.298 | 0.335 | 0.014 - 1.411 |
| Total root number | ABA 0 µM | 6.600 | 10.222 | 8.362 | 1.667 - 18.667 |
| ABA 3 µM | 2.500 | 9.667 | 6.986 | 1.000 - 11.333 |
| ABA 5 µM | 1.750 | 9.200 | 6.600 | 1.000 - 12.333 |
| Shallow root number | ABA 0 µM | 0.200 | 3.333 | 1.649 | 0.000 - 5.667 |
| ABA 3 µM | 0.000 | 3.177 | 1.092 | 0.000 - 3.540 |
| ABA 5 µM | 0.000 | 3.005 | 1.047 | 0.000 - 3.667 |
| Deep root number | ABA 0 µM | 7.400 | 6.889 | 7.043 | 1.667 - 14.667 |
| ABA 3 µM | 2.500 | 6.490 | 6.391 | 0.000 - 11.000 |
| ABA 5 µM | 1.750 | 6.195 | 6.155 | 0.000 - 9.333 |
| Root fresh weight | ABA 0 µM | 0.032 | 0.031 | 0.034 | 0.001 - 0.114 |
| ABA 3 µM | 0.016 | 0.029 | 0.033 | 0.000 - 0.083 |
| ABA 5 µM | 0.005 | 0.027 | 0.026 | 0.000 - 0.078 |