**S2 Table** Genes and SNPs identified within the distinct LD block on chromosome 6 and chromosome 8.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **SNPs in distinct LD block** | **Chr.** | **Position** | **Genes in the LD block** | **Annotation** | **Putative functions** |
| PZE-106078719 | 6 | 134460941 | GRMZM2G424783  GRMZM2G329033  GRMZM2G357198  GRMZM2G055678  GRMZM2G100067  GRMZM2G061469  GRMZM2G162702  GRMZM2G170646  GRMZM2G462625  GRMZM2G531738 | Emp24 family protein  Transcription factor IIA  Transposable element gene  Proline extensin-like receptor kinase 1  RAD3-like DNA-binding helicase protein  SLAC1 homologue 3  Serine/threonine-protein kinase  GDSL-like lipase/acylhydrolase  Tetratricopeptide repeat (TPR)-like protein  MYB family transcription factor | Response to heat-shock and cell death[[1](#_ENREF_1)]  Activated transcription[[2](#_ENREF_2)]  Defense responses[[3](#_ENREF_3)]  DNA Repair[[4](#_ENREF_4)]  Stomatal signalling[[5](#_ENREF_5)]  Strss response[[6](#_ENREF_6)]  Responses to biotic and abiotic stresses[[7](#_ENREF_7)]  Modulates development[[8](#_ENREF_8)]  Strss response and development control[[9](#_ENREF_9)] |
| PZE-106078723 | 6 | 134461413 |
| PZE-106078726 | 6 | 134461547 |
| PZE-106078845 | 6 | 134651274 |
| PZE-106078910 | 6 | 134657125 |
| PZE-106078990 | 6 | 134846181 |
| PZE-106079085 | 6 | 134863316 |
| SYN35781 | 6 | 134904332 |
| PZE-106079198 | 6 | 135128415 |
| SYN36674 | 6 | 135143457 |
| PZE-108035543 | 8 | 52204797 | GRMZM2G477457  AC205274.3\_FG001  GRMZM2G047966  GRMZM2G047998  GRMZM5G814722  GRMZM2G107718  AC235535.1\_FG001  GRMZM2G017666  GRMZM2G439589  GRMZM2G302405  GRMZM5G850758  GRMZM2G180488  GRMZM2G173119  GRMZM2G015959  GRMZM2G384871  GRMZM2G131074  GRMZM2G094808  GRMZM6G514393  AC194355.3\_FG002  GRMZM2G001755 | K+ uptake transporter 3  Pathogenesis-related gene 1  Transposable element gene  Transposable element gene  Transposable element gene  Ribosomal protein L5  Chromatin-remodeling protein  Hypothetical protein  NAD(P)-binding protein  TPR-like superfamily protein  Hypothetical protein  Hypothetical protein  Associated molecule with SH3 of STAM 3  DegP protease 9  Phosphoenolpyruvate carboxykinase  Hypothetical protein  Hypothetical protein  Peroxidase superfamily protein  mTERF family protein  Hypothetical protein | Compete for nutrients[[10](#_ENREF_10)]  Systemic resistance[[11](#_ENREF_11)]  Ribosomal biogenesis stress[[12](#_ENREF_12)]  Responses to stresses and plant development[[13](#_ENREF_13)]  Disease resistance[[14](#_ENREF_14)]  Modulate development[[8](#_ENREF_8)]  Intracellular trafficking and vacuole biogenesis[[15](#_ENREF_15)]  Thermal and oxidative tolerance[[16](#_ENREF_16)]  Photosynthesis[[17](#_ENREF_17)]  Plant defense and cell wall metabolism[[18](#_ENREF_18)]  Mitochondrion, chloroplast and leaf development[[19](#_ENREF_19)] |
| PZE-108035545 | 8 | 52205440 |
| PZA00498.5 | 8 | 52299429 |
| SYN25157 | 8 | 52299429 |
| PZE-108035582 | 8 | 52299792 |
| PZE-108035583 | 8 | 52299869 |
| PZE-108035671 | 8 | 52902989 |
| PZE-108035778 | 8 | 53329919 |
| SYN34307 | 8 | 53872820 |
| PZE-108035902 | 8 | 53874805 |
| PZE-108035926 | 8 | 53955319 |
| PZE-108035929 | 8 | 53957102 |
| PZE-108035931 | 8 | 53957272 |
| PZE-108036026 | 8 | 54324318 |
| PZE-108036054 | 8 | 54428423 |
| PZE-108036058 | 8 | 54444675 |
| PZE-108036077 | 8 | 54477661 |
| PZE-108036152 | 8 | 54888683 |
| PZE-108036175 | 8 | 55020791 |
| PZE-108036208 | 8 | 55169464 |
| PZE-108036220 | 8 | 55251243 |
| PZE-108036232 | 8 | 55259181 |
| PZE-108036270 | 8 | 55516140 |
| PZE-108036386 | 8 | 55966495 |
| PZE-108036444 | 8 | 56167353 |
| PZA01209.1 | 8 | 56203327 |

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