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Supplementary Material

Functional validation of the *Pi54* gene by knocking down its expression in a blast-resistant rice line using RNA interference and its effects on other traits

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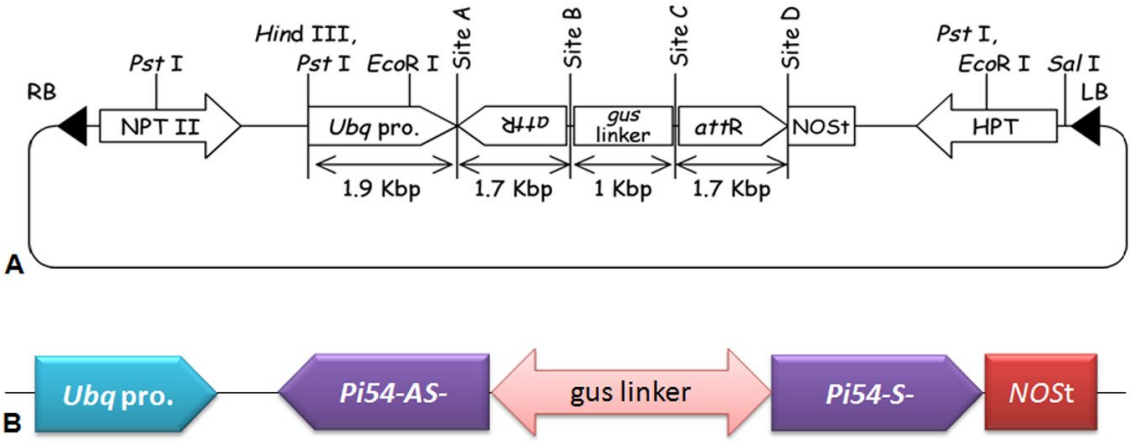
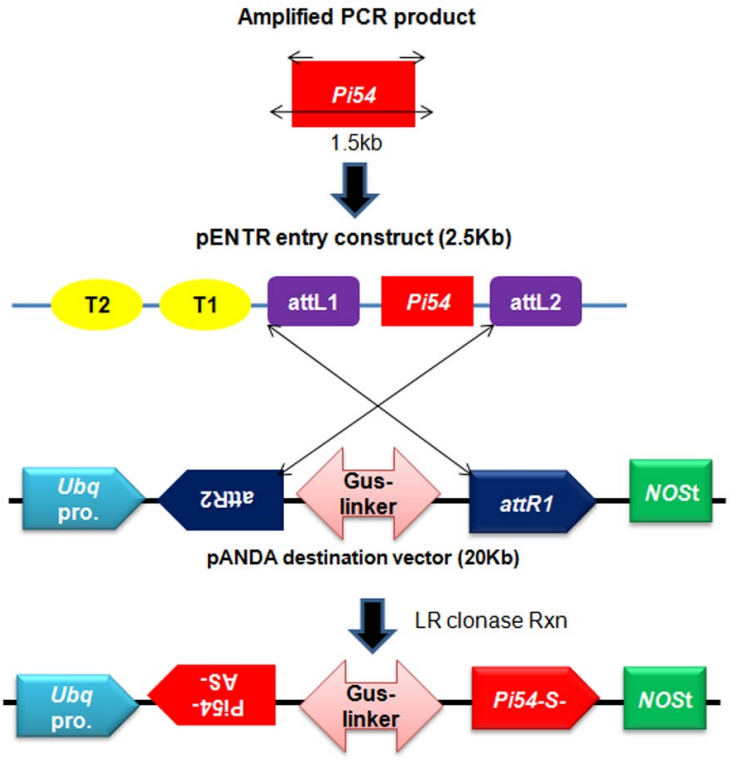
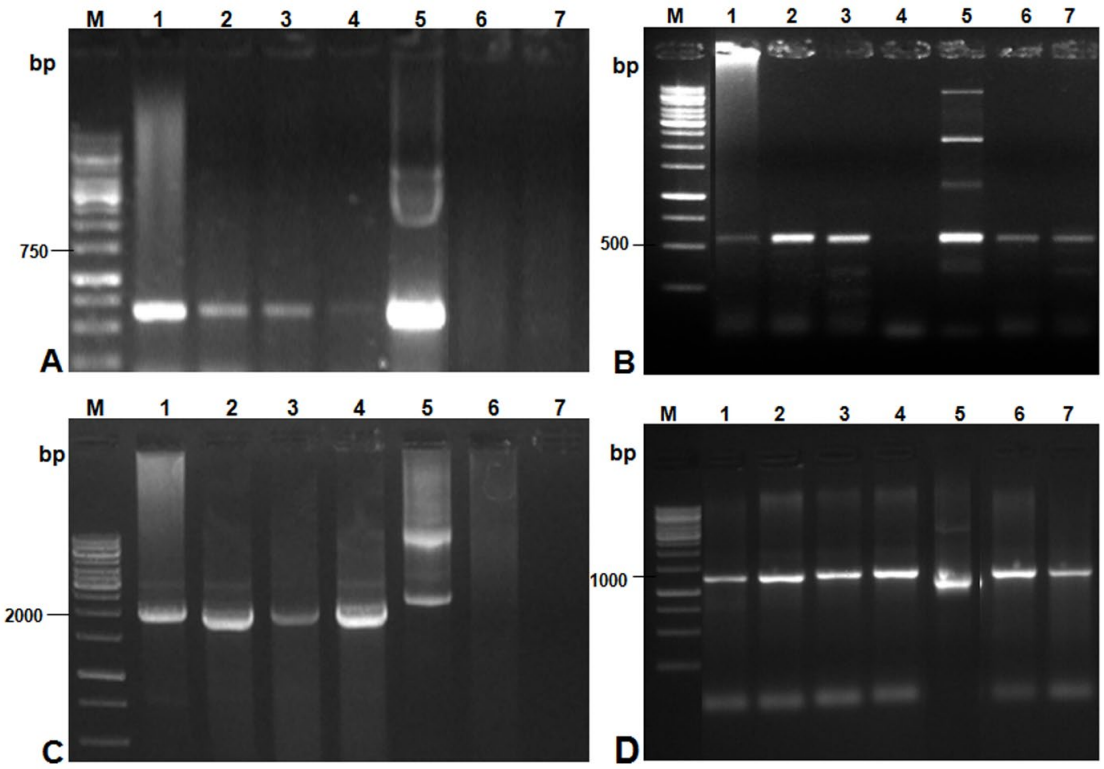


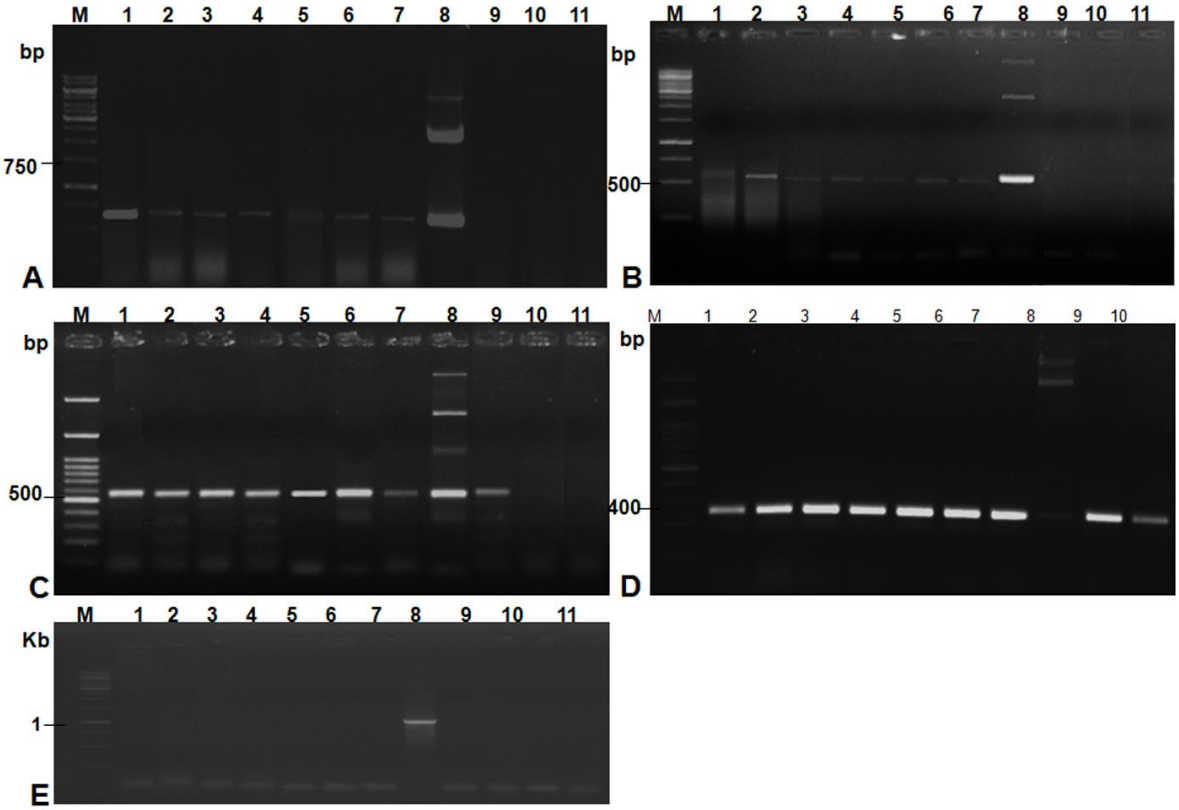
Supplementary Figure 1. Schematic diagram of pANDA vector based *Pi54* siRNA antisense gene cassette. **A**: pANDA vector; **B**: *Pi54* antisense gene cassette.



Supplementary Figure 2. Flowchart depicting development of RNAi construct using gateway technology.



Supplementary Figure 3. PCR screening of molecular tranformants with different sets of primers (A) PCR amplification with gus linker primers with desired size of 636 bp; (B) PCR amplification with kanamycin specific primers with desired size of 550 bp; (C) PCR amplification with Ubiquitin specific primers with desired size of 1.9Kb; (D) PCR amplification with *Pi54* specific primers with desired size of 1086 bp. Lane M- 1kb DNA ladder, lane 1 to lane 4- molecular transformants screened to be positive, lane5- RNAi construct, lane 6- Empty vector, lane 7- TP-Pi54-2.



Supplementary Figure 4. RT-PCR of molecular tranformants with different sets of primers (A) PCR amplification with gus linker primers with desired size of 636 bp; (B) PCR amplification with bar gene specific primers with desired size of 550 bp; (C) PCR amplification with kanamycin specific primers with desired size of 550 bp; (D) PCR amplification with Ubiquitin specific primers with desired size of 300bp; (E) PCR amplification with *Pi54*specific primers with desired size of 1086 bp. Lane M- 1kb DNA ladder, lane 1 to lane 7- molecular transformants screened to be positive, lane 8- RNAi construct, lane 9- Empty vector, lane 10- TP-Pi54-2, lane 11- no template control