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| **Table S3** Candidate genes of *Pita2.* aThe predicted protein is smaller than 100 amino acids in length, hence not considered for further analysis. bThe predicted protein belongs to typical repetitive sequence that is not considered for further analysis. NA: not applicable.  |
| Gene model in IR64 | Feature of predicted genes | Gene model in Nipponbare | Sequence polymorphism compared to alleles in susceptible varieties  | Candidate of *Pita2* |
| Nipponbare | CO39 | Unique polymer-phisms |
| IR64-1 | Unique | LOC\_Os12g18530 | Yes | Yes | Yes | Flanking marker (excluded) |
| IR64-2 | Protein in small size a | NA | NA | NA | NA | Excluded  |
| IR64-3 | Repetitive sequenceb | NA | NA | NA | NA | Excluded |
| IR64-4 | Unique | LOC\_Os12g18560 | Yes | Yes  | No | Excluded  |
| IR64-5 | Repetitive sequenceb | NA | NA | NA | NA | Excluded |
| IR64-6 | Unique | NA | Yes | Yes | Yes | Candidate |
| IR64-7 | Unique | NA | Yes | Yes | Yes | Candidate |
| IR64-8 | Unique | NA | Yes | Yes | Yes | Candidate |
| IR64-9 | Unique | LOC\_Os12g18630 | Yes | Yes | No | Excluded |
| IR64-10 | Unique | LOC\_Os12g18640 | Yes | No | NA | Excluded |
| IR64-11 | Unique | LOC\_Os12g18650 | Yes | No | NA | Excluded |
| IR64-12 | Protein in small size a | NA | NA | NA | NA | Excluded |
| IR64-13 | Repetitive sequence b | NA | NA | NA | NA | Excluded |
| IR64-14 | Protein in small size a | NA | NA | NA | NA | Excluded |
| IR64-15 | Unique | LOC\_Os12g18690 | Yes | Yes | Yes | Candidate |
| IR64-16 | Unique | NA | Yes | Yes | Yes | Candidate |
| IR64-17 | Unique | LOC\_Os12g18710 | Yes | Yes | No | Excluded |
| IR64-18 | Unique | LOC\_Os12g18729 | Yes | Yes | Yes | Candidate |
| IR64-19 | Repetitive sequence b | NA | NA | NA | NA | Excluded |
| IR64-20 | Unique | LOC\_Os12g18760 | Yes | Yes  | Yes | Candidate |
| IR64-21 | Repetitive sequence b | NA | NA | NA | NA | Excluded  |
| IR64-22 | Unique | LOC\_Os12g18770 | Yes | Yes | Yes | Candidate |
| IR64-23 | Unique | LOC\_Os12g18790 | Yes | Yes | Yes | Candidate |
| IR64-24 | Repetitive sequence b | NA | NA | NA | NA | Excluded  |
| IR64-25 | Repetitive sequence b | NA | NA | NA | NA | Excluded  |
| IR64-26 | Unique | LOC\_Os12g18810 | Yes | No | NA | Excluded |
| IR64-27 | Repetitive sequence b | NA | NA | NA | NA | Excluded  |
| IR64-28 | Unique | LOC\_Os12g18820 | No | NA | NA | Excluded |
| IR64-29 | Repetitive sequence b | NA | NA | NA | NA | Excluded  |
| IR64-30 | Repetitive sequence b | NA | NA | NA | NA | Excluded  |
| IR64-31 | Repetitive sequence b | NA | NA | NA | NA | Excluded  |
| IR64-32 | Repetitive sequence b | NA | NA | NA | NA | Excluded  |
| IR64-33 | Repetitive sequence b | NA | NA | NA | NA | Excluded  |
| IR64-34 | Unique | LOC\_Os12g18860 | No | NA | NA | Excluded |
| IR64-35 | Protein in small size a | NA | NA | NA | NA | Excluded |
| IR64-36 | Unique | LOC\_Os12g18880 | No | NA | NA | Excluded |
| IR64-37 | Protein in small size a | NA | NA | NA | NA | Excluded |
| IR64-38 | Unique | LOC\_Os12g18900 | No | NA | NA | Excluded |
| IR64-39 | Repetitive sequence b | NA | NA | NA | NA | Excluded |
| IR64-40 | Repetitive sequence b | NA | NA | NA | NA | Excluded |
| IR64-41 | Repetitive sequence b | NA | NA | NA | NA | Excluded |
| IR64-42 | Repetitive sequence b | NA | NA | NA | NA | Excluded |
| IR64-43 | Unique | LOC\_Os12g18920 | Yes | Yes | Yes | Flanking marker (excluded) |