**Supplementary data 2：Primer name and primer sequences**

Table S2. Primer and sequences

|  |  |  |
| --- | --- | --- |
| primer name | sequence of forward primer(5′-3′) | sequence of reverse primer(5′-3′) |
| SP1/SP2 | CCCGACATAGATGCAATAACTTC | GCGCGGTGTCATCTATGTTACT |
| primer-*LCH1* | CTTTCAGTCATTCAGTGCGTAA | GCATGGCATTCATTGCTC |
| primer-*LCH2* | ACTTGACAATCGATCCAACTAGC | CGAAGCTTTGCTGATCGGG |
| primer-*LCH3* | AGGAAGGAGGAGGTGTCGAG | CTATCGAGGAAGACACCGGC |

SP1/SP2: primer for detecting positive plants，primer-*LCH1*: Amplification primers for detecting mutations in the TS1 target site，primer-*LCH2*: Amplification primers for detecting mutations in the TS2 target site，primer-*LCH3*: Amplification primers for detecting mutations in the TS3 target site

Table S3. Internal reference and Mn transporter gene primer sequence

|  |  |  |
| --- | --- | --- |
| gene | sequence of forward primer(5′-3′) | sequence of reverse primer(5′-3′) |
| *OsActin* | CAGGCCGTCCTCTCTCTGTA | AAGGATAGCATGGGGGAGAG |
| *OsNramp5* | TTCGTTTATATTTGTGCGGTCC | CACCTCCCCTCAAATGCTTATA |
| *OsYSL2* | AGCGACAGATGAGGATACATTT | GTTGGAACATTATGGGTATCGC |
| *OsNramp3* | CAATTACAGGAACTTATGCGGG | TTGCCAAGGACCTAGTTAGAAG |
| *OsYSL6* | GCAATCATATCTTGGGGTTTCC | CCTTGTATCCGTATAGCCCTTT |