Supplementary Data 1 Multiple DNA sequence alignment for predicted protein of LOC_Os07g12130

```
Sequence 1: Nipponbare      438 aa
Sequence 2: Peiai64S        441 aa
Sequence 3: 9311            441 aa
CLUSTAL W (1.81) multiple sequence alignment

Peiai64S        MAAAGNSFLNQELVKVADGVSDWHLPSSSHGGTCHTNTRGAPITVGVPDLGCPVSSIGMA
9311            MAAAGNSFLNQELVKVADGVSDWHLPSSSHGGTCHTNTRGAPITVGVPDLGCPVSSIGMA
Nipponbare      MAAAGNSFLNQELVKVADGVSDWHLPSSSHGGTCHTNTRGAPITVGVPDLGCPVSSIGMA
                ************************************************************

Peiai64S        TSSSLMPKEGLTTASYNSVVAFPVGATMVPQQQQTQAAGSNDNPGLVKGGWTREEDEVLR
9311            TSSSLMPKEGLTTASYNSVVAFPVGATMVPQQQQTQAAGSNDNPGLVKGGWTGEEDEVLR
Nipponbare      TSSSLMPKEGLTTASYNSVVAFPVGATMVPQQQQTQAAGSNDNPGLVKGGWTREEDEVLR
                **************************************************** *******

Peiai64S        QMVRHHGDRKWAEIAKSLPGRVGKQCRERWTNHLHPDIKKDIWTEEEDRMLIEAHQTYGN
9311            QMVRHHGDRKWAEIAKSLPGRVGKQCRERWTNHLHPDIKKDIWTEEEDRMLIEAHQTYGN
Nipponbare      QMVRHHGDRKWAEIAKSLPGRVGKQCRERWTNHLHPDIKKDIWTEEEDRMLIEAHQTYGN
                ************************************************************

Peiai64S        SWSAIAKQLPGRSENTIKNHWNATKRSLNSKRRLRKKNSEQTVPGQPSLLENYIRSCQHM
9311            SWSAIAKRLPGRSENTVKNHWNATKRSLNSKRRLRKKNSEQTVPGQPSLLENYIRSCQHM
Nipponbare      SWSAIAKQLPGRSENTIKNHWNATKRSLNSKRRLRKKNSEQTVPGQPSLLESYIRSCQHM
                *******:********:*********************************.*********

Peiai64S        LPNETVPPPPAPPAPFDISRYGNSGVIDASPTLPVVQEPGTSTPPGLVMFLDLLNQAIPH
9311            LPSETVPPPPAPPAPFDISRYGNSGVIGASPTLPIVQEPGTSTPPGLVMFLDLLNQAIPH
Nipponbare      LPSETVPPP---PAPFDISRYGNSGVIGASPTLPVVQEPGTSTPPGLVMFLDLLNQAIPH
                **.******   ***************.******:*************************

Peiai64S        PPQPETMDLFNMTPEVSHLNTSGYCLQLDAGGNLYYGRLPVPAPVQPHGISTQELQDTPH
9311            PPQPETMDLFNMTPEVSHLNTSGYCLQLDAGGNLYYGRLPAPAPVQPHGISTQELQDTPH
Nipponbare      PPQPETMDLFNMTPEVSHLNTSGYCLQLDAGGNLYYGRLPAPAPVQPHGISTQELQDTPQ
                ****************************************.******************:

Peiai64S        LSLYYPLSSFAGSHTDGTVEFDHQLSNPDGGHYGEEAGPSSVAAGGSANGMDDNDVVQMA
9311            LSLYYPLSSFAGSHTDGTVEFDHQLSNPNGGHYGEEAGPSSVAAGGSANGMDDNDVVQMA
Nipponbare      LSLYYPLSSFAGSHTDGTVEFNHQLSNPNGGHYGEEAGPSSVATGGSANGMDDNDVVQMA
                *********************:******:**************:****************

Peiai64S        SNQFMMPSEDEGILDLARWIN
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9311            SNQFMMPCEDEGILDLARWIN
Nipponbare      SNQFMMPSEDEGILDLARWIN
                *******.*************
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Note: 8 altered loci between Pei'ai64S and 9311 and six amino acids differences between Nipponbare and Pei'ai64S, and a deletion of three amino acids (PAP) in Nipponbare were found from the Supplementary Data 1.

Supplementary Data 2 Multiple DNA sequence alignment for LOC_Os07g12130 in Pei′ai64S S1, S2, and S3

```
Sequence 1: Pei’ai64S_2378_     2378 bp
Sequence 2: S3_1273_            1273 bp
Sequence 3: S1_2320_            2320 bp
Sequence 4: S2_1701_            1701 bp

CLUSTAL W (1.81) multiple sequence alignment


Pei’ai64S_2378_      TACACGCCAGGGTAGAGTTCAACTTCATTGGAGAAAGAAAAACTAAGAGATGATAATCAT
S1_2320_             ------------------------------------------------------AATCAT
S2_1701_             ----------------------------------------------------ATAATCAT
S3_1273_             ------------------------------------------------------AATCAT
                                                                           ******

Pei’ai64S_2378_      AATTGTTATTATTAAATGGGTGATGGTTTGGAAGTACTGCGAACAAGCATCAGTTGATCC
S1_2320_             AATTGTTATTATTAAATGGGTGATGGTTTGGAAGTACTGCGAACAAGCATCAGTTGATCC
S2_1701_             AATTGTTATTATTAAATGGGTGATGGTTTGGAAGTACTGCGAACAAGCATCAGTTGATCC
S3_1273_             AATTGTTATTATTAAATGGGTGATGGTTTGGAAGTACTGCGAACAAGCATCAGTTGATCC
                     ************************************************************

Pei’ai64S_2378_      ACCTGGCCAGGTCAAGAATACCCTCATCCTCAGATGGCATCATAAACTGGTTGGACGCCA
S1_2320_             ACCTGGCCAGGTCAAGAATACCCTCATCCTCAGATGGCATCATAAACTGGTTGGACGCCA
S2_1701_             ACCTGGCCAGGTCAAGAATACCCTCATCCTCAGATGGCATCATAAACTGGTTGGACGCCA
S3_1273_             ACCTGGCCAGGTCAAGAATACCCTCATCCTCAGATGGCATCATAAACTGGTTGGACGCCA
                     ************************************************************

Pei’ai64S_2378_      TTTGGACGACGTCATTGTCATCCATGCCATTGGCGCTGCCACCAGCGGCGACGCTACTTG
S1_2320_             TTTGGACGACGTCATTGTCATCCATGCCATTGGCGCTGCCACCAGCGGCGACGCTACTTG
S2_1701_             TTTGGACGACGTCATTGTCATCCATGCCATTGGCGCTGCCACCAGCGGCGACGCTACTTG
S3_1273_             TTTGGACGACGTCATTGTCATCCATGCCATTGGCGCTGCCACCAGCGGCGACGCTACTTG
                     ************************************************************
```

```
Pei’ai64S_2378_      GGCCTGCCTCCTCACCATAGTGGCCGCCGTCCGGGTTGGACAACTGGTGATCGAACTCCA
S1_2320_             GGCCTGCCTCCTCACCATAGTGGCCGCCGTCCGGGTTGGACAACTGGTGATCGAACTCCA
S2_1701_             GGCCTGCCTCCTCACCATAGTGGCCGCCGTCCGGGTTGGACAACTGGTGATCGAACTCCA
S3_1273_             GGCCTGCCTCCTCACCATAGTGGCCGCCGTCCGGGTTGGACAACTGGTGATCGAACTCCA
                     ************************************************************

Pei’ai64S_2378_      CAGTGCCATCCGTGTGGCTCCCGGCAAATGATGACAGCGGGTAGTACAGGCTTAGGTGCG
S1_2320_             CAGTGCCATCCGTGTGGCTCCCGGCAAATGATGACAGCGGGTAGTACAGGCTTAGGTGCG
S2_1701_             CAGTGCCATCCGTGTGGCTCCCGGCAAATGATGACAGCGGGTAGTACAGGCTTAGGTGCG
S3_1273_             CAGTGCCATCCGTGTGGCTCCCGGCAAATGATGACAGCGGGTAGTACAGGCTTAGGTGCG
                     ************************************************************

Pei’ai64S_2378_      GAGTATCCTGCAGCTCCTGGGTACTGATCCCATGTGGCTGCACCGGTGCTGGTACTGGTA
S1_2320_             GAGTATCCTGCAGCTCCTGGGTACTGATCCCATGTGGCTGCACCGGTGCTGGTACTGGTA
S2_1701_             GAGTATCCTGCAGCTCCTGGGTACTGATCCCATGTGGCTGCACCGGTGCTGGTACTGGTA
S3_1273_             GAGTATCCTGCAGCTCCTGGGTACTGATCCCATGTGGCTGCACCGGTGCTGGTACTGGTA
                     ************************************************************

Pei’ai64S_2378_      GCCGGCCATAATACAGGTTGCCCCCTGCATCGAGCTGTAGACAGTATCCACTGGTGTTGA
S1_2320_             GCCGGCCATAATACAGGTTGCCCCCTGCATCGAGCTGTAGACAGTATCCACTGGTGTTGA
S2_1701_             GCCGGCCATAATACAGGTTGCCCCCTGCATCGAGCTGTAGACAGTATCCACTGGTGTTGA
S3_1273_             GCCGGCCATAATACAGGTTGCCCCCTGCATCGAGCTGTAGACAGTATCCACTGGTGTTGA
                     ************************************************************

Pei’ai64S_2378_      GGTGTGATACCTCCGGTGTCATGTTGAACAAATCCATGGTCTCTGGCTGCGGTGGGTGCG
S1_2320_             GGTGTGATACCTCCGGTGTCATGTTGAACAAATCCATGGTCTCTGGCTGCGGTGGGTGCG
S2_1701_             GGTGTGATACCTCCGGTGTCATGTTGAACAAATCCATGGTCTCTGGCTGCGGTGGGTGCG
S3_1273_             GGTGTGATACCTCCGGTGTCATGTTGAACAAATCCATGGTCTCTGGCTGCGGTGGGTGCG
                     ************************************************************

Pei’ai64S_2378_      GTATGGCCTGGTTGAGTAGATCAAGGAACATTACCAATCCTGGTGGTGTGGAGGTGCCTG
S1_2320_             GTATGGCCTGGTTGAGTAGATCAAGGAACATTACCAATCCTGGTGGTGTGGAGGTGCCTG
S2_1701_             GTATGGCCTGGTTGAGTAGATCAAGGAACATTACCAATCCTGGTGGTGTGGAGGTGCCTG
S3_1273_             GTATGGCCTGGTTGAGTAGATCAAGGAACATTACCAATCCTGGTGGTGTGGAGGTGCCTG
                     ************************************************************

Pei’ai64S_2378_      GCTCCTGCACAACGGGTAGAGTTGGACTTGCATCTATCACCCCACTATTGCCATACCTGC
S1_2320_             GCTCCTGCACAACGGGTAGAGTTGGACTTGCATCTATCACCCCACTATTGCCATACCTGC
S2_1701_             GCTCCTGCACAACGGGTAGAGTTGGACTTGCATCTATCACCCCACTATTGCCATACCTGC
S3_1273_             GCTCCTGCACAACGGGTAGAGTTGGACTTGCATCTATCACCCCACTATTGCCATACCTGC
                     ************************************************************

Pei’ai64S_2378_      TGATGTCAAATGGTGCGGGCGGCGCCGGCGGTGGCGGTACAGTTTCATTGGGAAGCATGT
S1_2320_             TGATGTCAAATGGTGCGGGCGGCGCCGGCGGTGGCGGTACAGTTTCATTGGGAAGCATGT
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S2_1701_            TGATGTCAAATGGTGCGGGCGGCGCCGGCGGTGGCGGTACAGTTTCATTGGGAAGCATGT
S3_1273_            TGATGTCAAATGGTGCGGGCGGCGCCGGCGGTGGCGGTACAGTTTCATTGGGAAGCATGT
                    ************************************************************

Pei’ai64S_2378_     GCTGGCAGCTACGGATGTAATTTTCAAGGAGGGAAGGCTGCCCCGGCACAGTTTGCTCGC
S1_2320_            GCTGGCAGCTACGGATGTAATTTTCAAGGAGGGAAGGCTGCCCCGGCACAGTTTGCTCGC
S2_1701_            GCTGGCAGCTACGGATGTAATTTTCAAGGAGGGAAGGCTGCCCCGGCACAGTTTGCTCGC
S3_1273_            GCTGGCAGCTACGGATGTAATTTTCAAGGAGGGAAGGCTGCCCCGGCACAGTTTGCTCGC
                    ************************************************************

Pei’ai64S_2378_     TGTTTTTCTTTCTCAGTCGCCGCTTTGAGTTCAGGCTTCGCTTGGTTGCATTCCAATGGT
S1_2320_            TGTTTTTCTTTCTCAGTCGCCGCTTTGAGTTCAGGCTTCGCTTGGTTGCATTCCAATGGT
S2_1701_            TGTTTTTCTTTCTCAGTCGCCGCTTTGAGTTCAGGCTTCGCTTGGTTGCATTCCAATGGT
S3_1273_            TGTTTTTCTTTCTCAGTCGCCGCTTTGAGTTCAGGCTTCGCTTGGTTGCATTCCAATGGT
                    ************************************************************

Pei’ai64S_2378_     TTTTTATGGTGTTTTCCGACCGTCCAGGAAGCTGCTTGGCAATCGCCGACCAGCTGTTCC
S1_2320_            TTTTTATGGTGTTTTCCGACCGTCCAGGAAGCTGCTTGGCAATCGCCGACCAGCTGTTCC
S2_1701_            TTTTTATGGTGTTTTCCGACCGTCCAGGAAGCTGCTTGGCAATCGCCGACCAGCTGTTCC
S3_1273_            TTTTTATGGTGTTTTCCGACCGTCCAGGAAGCTGCTTGGCAATCGCCGACCAGCTGTTCC
                    ************************************************************

Pei’ai64S_2378_     CATAAGTTTGGTGTGCTTCGATCAGCATCCTGTCCTCTTCTTCTGTCCAGATGTCTTTCT
S1_2320_            CATAAGTTTGGTGTGCTTCGATCAGCATCCTGTCCTCTTCTTCTGTCCAGATGTCTTTCT
S2_1701_            CATAAGTTTGGTGTGCTTCGATCAGCATCCTGTCCTCTTCTTCTGTCCAGATGTCTTTCT
S3_1273_            CATAAGTTTGGTGTGCTTCGATCAGCATCCTGTCCTCTTCTTCTGTCCAGATGTCTTTCT
                    ************************************************************

Pei’ai64S_2378_     GCAGTGTAAATCGCATTGCAATTTATTAAATTTGGAAGCATCCATATGATCAACAGCATA
S1_2320_            GCAGTGTAAATCGCATTGCAATTTATTAAATTTGGAAGCATCCATATGATCAACAGCATA
S2_1701_            GCAGTGTAAATCGCATTGCAATTTATTAAATTTGGAAGCATCCATATGATCAACAGCATA
S3_1273_            GCAGTGTAAATCGCATTGCAATTTATTAAATTTGGAAGCATCCATATGATCAACAGCATA
                    ************************************************************

Pei’ai64S_2378_     AGGCTATTAAAGGTCAATGTACCATTAAAGAAAATCAGTGAATTTTAGATTGTATCCATT
S1_2320_            AGGCTATTAAAGGTCAATGTACCATTAAAGAAAATCAGTGAATTTTAGATTGTATCCATT
S2_1701_            AGGCTATTAAAGGTCAATGTACCATTAAAGAAAATCAGTGAATTTTAGATTGTATCCATT
S3_1273_            AGGCTATTAAAGGTCAATGTACCATTAAAGAAAATCAGTGAATTTTAGATTGTATCCATT
                    ************************************************************

Pei’ai64S_2378_     AAGAAAAAGGAACTCCACGGATTCCACTTTAATGGTTTTTAATTTGAGCACATTTATTGA
S1_2320_            AAGAAAAAGGAACTCCACGGATTCCACTTTAATGGTTTTTAATTTGAGCACATTTATTGA
S2_1701_            AAGAAAAAGGAACTCCACGGATTCCACTTTAATGGTTTTTAATTTGAGCACATTTATTGA
S3_1273_            AAGAAAAAGGAACTCCACGGATTCCACTTTAATGGTTTTTAATTTGAGCACATTTATTGA
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                    ************************************************************

Pei’ai64S_2378_     GAAATAAAAGCATATATACATAGATATGATAATTAACATATACCATTTTTGTACAGGGTG
S1_2320_            GAAATAAAAGCATATATACATAGATATGATAATTAACATATACCATTTTTGTACAGGGTG
S2_1701_            GAAATAAAAGCATATATACATAGATATGATAATTAACATATACCATTTTTGTACAGGGTG
S3_1273_            GAAATAAAAGCATATATACATAGATATGATAATTAACATATACCATTTTTGTACAGGGTG
                    ************************************************************

Pei’ai64S_2378_     CCACCAAATAATGTTAGTGATTACTCTAGTGACAAATAAAGAAGATATTGTACCTAGTAA
S1_2320_            CCACCAAATAATGTTAGTGATTACTCTAGTGACAAATAAAGAAGATATTGTACCTAGTAA
S2_1701_            CCACCAAATAATGTTAGTGATTACTCTAGTGACAAATAAAGAAGATATTGTACCTAGTAA
S3_1273_            CCACCAAATAATGTTAGTGATTACTCTAGTGACAAATAAAGAAGATATTGTACCTAGTAA
                    ************************************************************

Pei’ai64S_2378_     AATGTAAAGCAATATATAAAAACATAGGATTGGGACTGATAAGTGTCATACACATTTTGG
S1_2320_            AATGTAAAGCAATATATAAAAACATAGGATTGGGACTGATAAGTGTCATACACATTTTGG
S2_1701_            AATGTAAAGCAATATATAAAAACATAGGATTGGGACTGATAAGTGTCATACACATTTTGG
S3_1273_            AATGTAAAGCAATATATAAAAACATAGGATTGGGACTGATAAGTGTCATACACATTTTGG
                    ************************************************************

Pei’ai64S_2378_     ACTAATAAGTGTCTAAAACATTGAGCTTAATTTGCATATACAACAATGATTAAAAACACA
S1_2320_            ACTAATAAGTGTCTAAAACATTGAGCTTAATTTGCATATACAACAATGATTAAAAACACA
S2_1701_            ACTAATAAGTGTCTAAAACATTGAGCTTAATTTGCATATACAACAATGATTAAAAACACA
S3_1273_            ACTAATA-----------------------------------------------------
                    *******

Pei’ai64S_2378_     AATAAACTTGGTGGACTACTGTCCAGAGTAGTTTTTTCCTAGGACTACAAATAATGTGTG
S1_2320_            AATAAACTTGGTGGACTACTGTCCAGAGTAGTTTTTTCCTAGGACTACAAATAATGTGTG
S2_1701_            AATAAACTTGGTGGACTACTGTCCAGAGTAGTTTTTTCCTAGGACTACAAATAATGTGTG
S3_1273_            ------------------------------------------------------------


Pei’ai64S_2378_     GGATCCATTAATGGCCCTAGCGAAGAAATTCCTACATTTATTAACTAGAATAAAAGACAT
S1_2320_            GGATCCATTAATGGCCCTAGCGAAGAAATTCCTACATTTATTAACTAGAATAAAAGACAT
S2_1701_            GGATCCATTAATGGCCCTAGCGAAGAAATTCCTACATTTATTAACTAGAATAAAAGACAT
S3_1273_            ------------------------------------------------------------


Pei’ai64S_2378_     GCAACATGACTAACTAATTACTCAAATAATCGGCTCCCGTTTAATGTTGAATATTATGAA
S1_2320_            GCAACATGACTAACTAATTACTCAAATAATCGGCTCCCGTTTAATGTTGAATATTATGAA
S2_1701_            GCAACATGACTAACTAATTACTCAAATAATCGGCTCCCGTTTAATGTTGAATATTATGAA
S3_1273_            ------------------------------------------------------------
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Pei’ai64S_2378_      ATTTGTACCATTTTCACGTAAATCTGAAAATAAACTCCACCTCTAAAATTGCACAGAGAA
S1_2320_             ATTTGTACCATTTTCACGTAAATCTGAAAATAAACTCCACCTCTAAAATTGCACAGAGAA
S2_1701_             ATTTGTACCATTTTCACGTAAATCTGAAAATAAACTCCACCTCTAAAATTGCACAGAGAA
S3_1273_             ------------------------------------------------------------


Pei’ai64S_2378_      AGAACTAGGATCCCTTAGATATACACATATAACCGAAGGAATATAGCAAGATACAGACCT
S1_2320_             AGAACTAGGATCCCTTAGATATACACATATAACCGAAGGAATATAGCAAGATACAGACCT
S2_1701_             AGAACTAGGATCCCTTAGATATACACATATAACCGAAGGAATATAGCAAGATACAGACCT
S3_1273_             ------------------------------------------------------------


Pei’ai64S_2378_      TGATGTCCGGGTGCAGATGGTTGGTCCATCTCTCGCGGCACTGCTTCCCAACCCGACCTG
S1_2320_             TGATGTCCGGGTGCAGATGGTTGGTCCATCTCTCGCGGCACTGCTTCCCAACCCGACCTG
S2_1701_             TGATGTCCGGGTGCAGATGGTTGGTCCATCTCTCGCGGCACTGCTTCCCAACCCGACCTG
S3_1273_             ------------------------------------------------------------


Pei’ai64S_2378_      GGAGGCTCTTTGCAATCTCTGCCCACTTGCGATCTCCATGGTGTCTCACCATCTGCCTAA
S1_2320_             GGAGGCTCTTTGCA-TCTCTGCCCACTTGCGATCTCCATGGTGTCTCACCATCTGCCTAA
S2_1701_             GGAGGCTCTTTGC-----------------------------------------------
S3_1273_             ------------------------------------------------------------


Pei’ai64S_2378_      GAACTCTATAATCAAAAGAACACAACAATAGTTCAAGATCTCATCACAAGAATGAAGAGA
S1_2320_             GAACTCTATAATCAAAAGAACACAACAATAGTTCAAGATCTCATCACAAGAATGAAGAGA
S2_1701_             ------------------------------------------------------------
S3_1273_             ------------------------------------------------------------


Pei’ai64S_2378_      TGCCAAGAAACAAGAATTAAAATCTGATTAGAAGTAGACAGATCTCTCACTTACTCATCC
S1_2320_             TGCCAAGAAACAAGAATTAAAATCTGATTAGAAGTAGACAGATCTCTCACTTACTCATCC
S2_1701_             ------------------------------------------------------------
S3_1273_             ------------------------------------------------------------


Pei’ai64S_2378_      TCTTCCCTTGTCCACCCTCCTTTGACCAACCCTGGGTTGTCGTTGCTACCTGCAGCTTGC
S1_2320_             TCTTCCCTTGTCCACCCTCCTTTGACCAACCCTGGGTTGTCGTTGCTACCTGCAGCTTGC
S2_1701_             ------------------------------------------------------------
S3_1273_             ------------------------------------------------------------


Pei’ai64S_2378_      GTCTGCTGTTGTTGAGGCACCATCGTAGCACCTACTGGAAAGGCAACAACCGAGTTGTAA
S1_2320_             GTCTGCTGTTGTTGAGGCACCATCGTAGCACCTACTGGAAAGGCAACAACCGAGTTGTAA
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S2_1701_            ------------------------------------------------------------
S3_1273_            ------------------------------------------------------------


Pei’ai64S_2378_     CTAGCGGTTGTCAGGCCCTCCTTTGGCATTAGAGAGCTTGACGTAGCCATGCCTATGCTA
S1_2320_            CTAGCGGTTGTCAGGCCCTCCTTTGGCATTAGAGAGCTTGACGTAGCCATGCCTATGCTA
S2_1701_            ------------------------------------------------------------
S3_1273_            ------------------------------------------------------------


Pei’ai64S_2378_     GAAACAGGGCACCCTAAGTCGGGGACCCCCACGGTGATTGGAGCACCACGAGTGTTCGTG
S1_2320_            GAAACAGGGCACCCTAAGTCGGGGACCCCCACGGTGATTGGAGCACCACGAGTGTTCGTG
S2_1701_            ------------------------------------------------------------
S3_1273_            ------------------------------------------------------------


Pei’ai64S_2378_     TGGCAAGTACCACCATGGCTAGAGCTCGGAAGGTGCCAATCCGACACCCCGTCGGCCACC
S1_2320_            TGGCAAGTACCACCATGGCTAGAGCTCGGAAGGTGCCAATCCGACACCCCGTCGGCCACC
S2_1701_            ------------------------------------------------------------
S3_1273_            ------------------------------------------------------------


Pei’ai64S_2378_     TTCACTAACTCCTGGTTGAGGAAGGAGTTACCTGCAGCCGCCATGATTCACCTTCCAAGG
S1_2320_            TTCACTAACTCCTGGTTGAGGAAGGAGTTACCTGCAGCCGCCATGATTCACCTTCCAAGG
S2_1701_            ------------------------------------------------------------
S3_1273_            ------------------------------------------------------------


Pei’ai64S_2378_     AAAGAAGCAACGGAAAGAATTGCCGAGGATTGGGGAGGCAAATCGACCTCGATATGGAGG
S1_2320_            AAAGAAGCAACGGAAAGAATTGCCGAGGATTGGGGAGGCAAATCGACCTCGATATGGAGG
S2_1701_            ------------------------------------------------------------
S3_1273_            ------------------------------------------------------------


Pei’ai64S_2378_     AAATTGAGAAGGGGATTGTCTAGTGTGGAGATGGGTCA
S1_2320_            AAATTGAGAAGGGGATTGTCTAGTGTGGAGATGGG---
S2_1701_            --------------------------------------
S3_1273_            --------------------------------------
```

Note: there is no difference in LOC_Os07g12130 between Pei'ai64S and two sterile plants except a single base deletion for S1.

Supplementary Data 3 Multiple DNA sequence alignment for LOC_Os07g12130 in Pei′ai64S, 9311, and Nipponbare

```
Sequence 1: Pei'ai64S      2378 bp
Sequence 2: Nipponbare     2377 bp
Sequence 3: 9311           2386 bp

CLUSTAL W (1.81) multiple sequence alignment


Nipponbare      -ACACGC-AGGTGAGAGTTCAACTTCATTGGAGAAAGAAAAACTAAGAGATGATAATCAT
9311            -ACACGC-AGGTGAGAGTTCAACTTCATTGGAGAAAGAAAAACTAAGAGATGATAATCAT
Pei'ai64S       TACACGCCAGGGTAGAGTTCAACTTCATTGGAGAAAGAAAAACTAAGAGATGATAATCAT
                 ****** ***  ***********************************************

Nipponbare      AATTGTTATTATTAAATGGGTGATGGTTTGGAAGTACTGTGAACAAGCCTCAGTTGATCC
9311            AATTGTTATTATTAAATGGGTGATGGTTTGGAAGTACTGCGAACAAGCCTCAGTTGATCC
Pei'ai64S       AATTGTTATTATTAAATGGGTGATGGTTTGGAAGTACTGCGAACAAGCATCAGTTGATCC
                *************************************** ******** ***********

Nipponbare      ACCTGGCCAGGTCAAGAATACCCTCATCCTCAGATGGCATCATAAACTGGTTGGACGCCA
9311            ACCTGGCCAGGTCAAGAATACCCTCATCCTCACATGGCATCATAAACTGGTTGGACGCCA
Pei'ai64S       ACCTGGCCAGGTCAAGAATACCCTCATCCTCAGATGGCATCATAAACTGGTTGGACGCCA
                ******************************** ***************************

Nipponbare      TTTGGACGACGTCATTGTCATCCATGCCATTGGCGCTGCCACCAGTGGCGACGCTACTTG
9311            TTTGGACGACGTCATTGTCATCCATGCCATTGGCGCTGCCACCAGCGGCGACGCTACTTG
Pei'ai64S       TTTGGACGACGTCATTGTCATCCATGCCATTGGCGCTGCCACCAGCGGCGACGCTACTTG
                ********************************************* **************

Nipponbare      GGCCTGCCTCCTCGCCATAGTGGCCGCCGTTCGGGTTGGACAACTGGTGATTGAACTCCA
9311            GGCCTGCCTCCTCGCCATAGTGGCCGCCGTTCGGGTTGGACAACTGGTGATCGAACTCCA
Pei'ai64S       GGCCTGCCTCCTCACCATAGTGGCCGCCGTCCGGGTTGGACAACTGGTGATCGAACTCCA
                ************* **************** ******************** ********

Nipponbare      CAGTGCCATCCGTGTGGCTCCCGGCAAATGACGACAGCGGGTAGTACAGGCTTAGTTGCG
9311            CAGTGCCATCCGTGTGGCTCCCGGCAAATGACGACAGCGGGTAGTACAGGCTTAGGTGCG
Pei'ai64S       CAGTGCCATCCGTGTGGCTCCCGGCAAATGATGACAGCGGGTAGTACAGGCTTAGGTGCG
                ******************************* *********************** ****

Nipponbare      GAGTATCCTGCAGCTCCTGGGTACTGATCCCATGTGGCTGCACCGGTGCTGGTGCTGGTA
9311            GAGTATCCTGCAGCTCCTGGGTACTGATCCCATGTGGCTGCACCGGTGCTGGTGCTGGTA
Pei'ai64S       GAGTATCCTGCAGCTCCTGGGTACTGATCCCATGTGGCTGCACCGGTGCTGGTACTGGTA
                ***************************************************** ******
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Nipponbare      GCCGGCCATAATACAGGTTGCCCCCTGCATCGAGCTGTAGACAGTATCCACTAGTGTTGA
9311            GCCGGCCATAATACAGGTTGCCCCCTGCATCGAGCTGTAGACAGTATCCACTGGTGTTGA
Pei’ai64S       GCCGGCCATAATACAGGTTGCCCCCTGCATCGAGCTGTAGACAGTATCCACTGGTGTTGA
                **************************************************** *******

Nipponbare      GGTGTGATACCTCCGGTGTCATGTTGAACAAGTCCATGGTCTCTGGCTGCGGTGGGTGCG
9311            GGTGTGATACCTCCGGTGTCATGTTGAACAAGTCCATGGTCTCTGGCTGCGGTGGGTGCG
Pei’ai64S       GGTGTGATACCTCCGGTGTCATGTTGAACAAATCCATGGTCTCTGGCTGCGGTGGGTGCG
                ******************************* ****************************

Nipponbare      GTATGGCCTGGTTGAGTAGATCAAGGAACATTACCAATCCTGGTGGTGTGGAGGTGCCTG
9311            GTATGGCCTGGTTGAGTAGATCAAGGAACATTACCAATCCTGGTGGTGTGGAGGTGCCTG
Pei’ai64S       GTATGGCCTGGTTGAGTAGATCAAGGAACATTACCAATCCTGGTGGTGTGGAGGTGCCTG
                ************************************************************

Nipponbare      GCTCCTGCACAACGGGTAGAGTTGGACTTGCACCTATCACCCCACTATTGCCATACCTGC
9311            GCTCCTGCACAATGGGTAGAGTTGGACTTGCACCTATCACCCCACTATTGCCATACCTGC
Pei’ai64S       GCTCCTGCACAACGGGTAGAGTTGGACTTGCATCTATCACCCCACTATTGCCATACCTGC
                ************ ******************* ***************************

Nipponbare      TGATGTCAAATGGTGCGGGCG---------GTGGCGGTACAGTTTCACTGGGAAGCATGT
9311            TGATGTCAAATGGTGCGGGCGGCGCCGGCGGTGGCGGTACAGTTTCACTGGGAAGCATGT
Pei’ai64S       TGATGTCAAATGGTGCGGGCGGCGCCGGCGGTGGCGGTACAGTTTCATTGGGAAGCATGT
                *********************         ***************** ************

Nipponbare      GCTGGCAGCTACGGATGTAACTTTCAAGGAGGGAAGGCTGCCCTGGCACAGTTTGCTCGC
9311            GTTGGCAGCTACGGATGTAATTTTCAAGGAGGGAAGGCTGCCCCGGCACAGTTTGCTCGC
Pei’ai64S       GCTGGCAGCTACGGATGTAATTTTCAAGGAGGGAAGGCTGCCCCGGCACAGTTTGCTCGC
                * ****************** ********************** ****************

Nipponbare      TGTTTTTCTTTCTCAGTCGCCGCTTTGAGTTCAGGCTTCGCTTGGTCGCATTCCAATGGT
9311            TGTTTTTCTTTCTCAGTCGCCGCTTTGAGTTCAGGCTTCGCTTGGTCGCATTCCAATGGT
Pei’ai64S       TGTTTTTCTTTCTCAGTCGCCGCTTTGAGTTCAGGCTTCGCTTGGTTGCATTCCAATGGT
                ********************************************** *************

Nipponbare      TTTTTATGGTGTTCTCCGACCGTCCAGGAAGCTGCTTGGCAATCGCCGACCAGCTGTTCC
9311            TTTTTACGGTGTTCTCCGACCGTCCAGGAAGCCGCTTGGCAATCGCCGACCAGCTGTTCC
Pei’ai64S       TTTTTATGGTGTTTTCCGACCGTCCAGGAAGCTGCTTGGCAATCGCCGACCAGCTGTTCC
                ****** ****** ****************** ***************************

Nipponbare      CATAAGTTTGGTGTGCTTCGATCAGCATCCTGTCCTCTTCTTCTGTCCAGATGTCTTTCT
9311            CATAAGTTTGGTGTGCTTCGATCAGCATCCTGTCCTCTTCTTCTGTCCAGATGTCTTTCT
Pei’ai64S       CATAAGTTTGGTGTGCTTCGATCAGCATCCTGTCCTCTTCTTCTGTCCAGATGTCTTTCT
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Nipponbare    GCAGTGTAAATCGCATTGCAATTTATTAAATTTGGAAGCATCCATATGATCAACAGCATA
9311          GCAGTGTAAATCGCATTGCAATTTATTAAATTTGGAAGCATCCATATGATCAACAGCATA
Pei’ai64S     GCAGTGTAAATCGCATTGCAATTTATTAAATTTGGAAGCATCCATATGATCAACAGCATA
              ************************************************************

Nipponbare    AGGCTATTAAAGGTCAATGTACCATTAAAGAAAATCAGTGAATTTTAGATTGTATCCATT
9311          AGGCTATTAAAGGTCAATGTACCATTAAAGAAAATCAGTGAATTTTAGATTGTATCCATT
Pei’ai64S     AGGCTATTAAAGGTCAATGTACCATTAAAGAAAATCAGTGAATTTTAGATTGTATCCATT
              ************************************************************

Nipponbare    AAGAAAAAGGAACTCCACGGATTCCACTTTAATGGTTTTTAATTTGAGCACATTTATTGA
9311          AAGAAAAAGGAACTCCACGGATTCCACTTTAATGGTTTTTAATTTGAGCACATTTATTGA
Pei’ai64S     AAGAAAAAGGAACTCCACGGATTCCACTTTAATGGTTTTTAATTTGAGCACATTTATTGA
              ************************************************************

Nipponbare    GAAATAAAAGCATATATACATAGATATGATAATTAACATATACCATTTTTGTACAGGGTG
9311          GAAATAAAAGCATATATACATAGATATGATAATTAACATATACCATTTTTGTACAGGGTG
Pei’ai64S     GAAATAAAAGCATATATACATAGATATGATAATTAACATATACCATTTTTGTACAGGGTG
              ************************************************************

Nipponbare    CCACCAAATAATGTTAGTGATTACTCTAGTGACAAATAAAGAAGATATTGTACCTAGTAA
9311          CCACCAAATAATGTTAGTGATTACTCTAGTGACAAATAAAGAAGATATTGTACCTAGTAA
Pei’ai64S     CCACCAAATAATGTTAGTGATTACTCTAGTGACAAATAAAGAAGATATTGTACCTAGTAA
              ************************************************************

Nipponbare    AATGTAAAGCAATATATAAAAACATAGGATTGGGACTGATAAGTGTCATACACATTTTGG
9311          AATGTAAAGCAATATATAAAAACATAGGATTGGGACTGATAAGTGTCATACACATTTTGG
Pei’ai64S     AATGTAAAGCAATATATAAAAACATAGGATTGGGACTGATAAGTGTCATACACATTTTGG
              ************************************************************

Nipponbare    ACTAATAAGTGTCTAAAACATTGAGCTTAATTTGCATATACAACAATGATTAAAAACACA
9311          ACTAATAAGTGTCTAAAACATTGAGCTTAATTTGCATATACAACAATGATTAAAAACACA
Pei’ai64S     ACTAATAAGTGTCTAAAACATTGAGCTTAATTTGCATATACAACAATGATTAAAAACACA
              ************************************************************

Nipponbare    AATAAACTTGGTGGACTACTGTCCAGAGTAGTTCTTTCCTAGGACTACAAATAATGTGTG
9311          AATAAACTTGGTGGACTACTGTCCAGAGTAGTTTTTTCCTAGGACTACAAATAATGTGTG
Pei’ai64S     AATAAACTTGGTGGACTACTGTCCAGAGTAGTTTTTTCCTAGGACTACAAATAATGTGTG
              ********************************* **************************

Nipponbare    GGATCCATTAATGGCCCTAGCGAAGAAATTCCTACATTTATTAACTAGAATAAAAGACAT
9311          GGATCCATTAATGGCCCTAGCGAAGAAATTCCTACATTTATTAACTAGAATAAAAGACAT
Pei’ai64S     GGATCCATTAATGGCCCTAGCGAAGAAATTCCTACATTTATTAACTAGAATAAAAGACAT
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                ************************************************************

Nipponbare      GCAACATGACTAACTAATTACTCAAATAATCGGCTCCCGTTTAATGTTGAATATTATGAA
9311            GCAACATGACTAACTAATTACTCAAATAATCGGCTCCCGTTTAATGTTGAATATTATGAA
Pei’ai64S       GCAACATGACTAACTAATTACTCAAATAATCGGCTCCCGTTTAATGTTGAATATTATGAA
                ************************************************************

Nipponbare      ATCTGTACCATTTTCACGTAAATCTGAAAATAAACTCCACCTCTAAAATTGCACAGAGAA
9311            ATTTGTACCATTTTCACGTAAATCTGAAAATAAACTCCACCTCTAAAATTGCACAGAGAA
Pei’ai64S       ATTTGTACCATTTTCACGTAAATCTGAAAATAAACTCCACCTCTAAAATTGCACAGAGAA
                ** *********************************************************

Nipponbare      AGAACTAGGATCCCTTAGATCTACACATATAACCGAAGGAATATAGCAAGATACAGACCT
9311            AGAACTAGGATCCCTTAGATCTACACATATAACCGAAGGAATATAGCAAGATACAGACCT
Pei’ai64S       AGAACTAGGATCCCTTAGATATACACATATAACCGAAGGAATATAGCAAGATACAGACCT
                ******************** ***************************************

Nipponbare      TGATGTCCGGGTGCAGATGGTTGGTCCATCTCTCGCGGCACTGCTTCCCAACCCGACCTG
9311            TGATGTCCGGGTGCAGATGGTTGGTCCATCTCTCGCGGCACTGCTTCCCAACCCGACCTG
Pei’ai64S       TGATGTCCGGGTGCAGATGGTTGGTCCATCTCTCGCGGCACTGCTTCCCAACCCGACCTG
                ************************************************************

Nipponbare      GGAGGCTCTTTGCAATCTCTGCCCACTTGCGATCTCCATGGTGTCTCACCATTTGCCTAA
9311            GGAGGCTCTTTGCAATCTCTGCCCACTTGCGATCTCCATGGTGTCTCACCATCTGCCTCA
Pei’ai64S       GGAGGCTCTTTGCAATCTCTGCCCACTTGCGATCTCCATGGTGTCTCACCATCTGCCTAA
                **************************************************** ***** *

Nipponbare      GAACTCTATAATCAAAAGAACACAACAATAGTTCAAGATCTCATCACAAGATTGAAGAGA
9311            GAACTCTATAATCAAAAGAACACAACAATAGTTCAAGATCTCATCACAAGATTGAAGATA
Pei’ai64S       GAACTCTATAATCAAAAGAACACAACAATAGTTCAAGATCTCATCACAAGAATGAAGAGA
                *************************************************** ****** *

Nipponbare      TGCCAAGAAACAAGAATTAAAATCTGATTAGAAGTAGACAGATCTGTCACTTACTCATCC
9311            TGCCAAGAAACAAGAATTAAAATCTGATTAGAAGTAGACAGATCTATCACTTACTCATCC
Pei’ai64S       TGCCAAGAAACAAGAATTAAAATCTGATTAGAAGTAGACAGATCTCTCACTTACTCATCC
                ********************************************* **************

Nipponbare      TCTTCCCTTGTCCACCCTCCTTTGACCAACCCTGGGTTGTCGTTGCTACCTGCAGCTTGC
9311            TCTTCCCCTGTCCACCCTCCTTTGACCAACCCTGGGTTGTCGTTGCTACCTGCAGCTTGC
Pei’ai64S       TCTTCCCTTGTCCACCCTCCTTTGACCAACCCTGGGTTGTCGTTGCTACCTGCAGCTTGC
                ******* ****************************************************

Nipponbare      GTCTGCTGTTGTTGAGGCACCATCGTAGCACCTACTGGAAAGGCAACAACCGAGTTGTAA
9311            GTCTGCTGTTGTTGAGGCACCATCGTAGCACCTACTGGAAAGGCAACAACCGAGTTGTAA
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Pei’ai64S       GTCTGCTGTTGTTGAGGCACCATCGTAGCACCTACTGGAAAGGCAACAACCGAGTTGTAA
                ************************************************************

Nipponbare      CTAGCGGTTGTCAGGCCCTCCTTTGGCATTAGAGAGCTTGACGTAGCCATGCCTATGCTA
9311            CTAGCGGTTGTCAGGCCCTCCTTTGGCATTAGAGAGCTTGACGTAGCCATGCCTATGCTA
Pei’ai64S       CTAGCGGTTGTCAGGCCCTCCTTTGGCATTAGAGAGCTTGACGTAGCCATGCCTATGCTA
                ************************************************************

Nipponbare      GAAACAGGGCACCCTAAGTCGGGGACCCCCACGGTGATTGGAGCACCACGAGTGTTCGTG
9311            GAAACAGGGCACCCTAAGTCGGGGACCCCCACGGTGATTGGAGCACCACGAGTGTTCGTG
Pei’ai64S       GAAACAGGGCACCCTAAGTCGGGGACCCCCACGGTGATTGGAGCACCACGAGTGTTCGTG
                ************************************************************

Nipponbare      TGGCAAGTACCACCATGGCTAGAGCTCGGAAGGTGCCAATCCGACACCCCGTCGGCCACC
9311            TGGCAAGTACCACCATGGCTAGAGCTCGGAAGGTGCCAATCCGACACCCCGTCGGCCACC
Pei’ai64S       TGGCAAGTACCACCATGGCTAGAGCTCGGAAGGTGCCAATCCGACACCCCGTCGGCCACC
                ************************************************************

Nipponbare      TTCACTAACTCCTGGTTGAGGAAGGAGTTACCTGCAGCCGCCATGATTCACCTTCCAAGG
9311            TTCACTAACTCCTGGTTGAGGAAGGAGTTACCTGCAGCCGCCATGATTCACCTTCCAAGG
Pei’ai64S       TTCACTAACTCCTGGTTGAGGAAGGAGTTACCTGCAGCCGCCATGATTCACCTTCCAAGG
                ************************************************************

Nipponbare      AAAGAAGCAACGGAAAGAATTGCCGAGGATTGGGGAGGCAAATCGACCTCAATATGGAGG
9311            AAAGAAGCAACGGAAAGAATTGCCGAGGATTGGGGAGGCAAATCGACCTCGATATGGAGG
Pei’ai64S       AAAGAAGCAACGGAAAGAATTGCCGAGGATTGGGGAGGCAAATCGACCTCGATATGGAGG
                ************************************************** *********

Nipponbare      AAATTGAGAAGGGGATTGTCTAGTGTGGAGATGGGGACTCAAGTTCCC
9311            AAATTGAGAAGGGGATTGTCTAGTGTGGAGATGGGGACTCAAGTTCCC
Pei’ai64S       AAATTGAGAAGGGGATTGTCTAGTGTGGAGATGGG---TCA-------
                ***********************************   ***
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Note: 29 differences of single nucleotide polymorphisms were detected among Pei'ai64S, 9311 and Nipponbare.

Supplementary Data 4 Multiple DNA sequence alignment for LOC_Os07g12240 in Pei′ai64S, 9311, and Nipponbare

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Sequence 1: Nipponbare      564 bp
Sequence 2: 9311            564 bp
Sequence 3: Pei’ai64S       822 bp

CLUSTAL W (1.81) multiple sequence alignment


Nipponbare      ------------------------------------------------------------
Pei’ai64S       GGATCTATGTCAGCTATATATACAGGCTATTTGCATGTAAGTTGAGATGTTCCTTTGAGT
9311            ------------------------------------------------------------



Nipponbare      ------------------------------------------------------------
Pei’ai64S       AAGCACTTCAATAAGGTACACTGGATTTCATTGCTGTTCAATTTGCTGCATTTCACACAA
9311            ------------------------------------------------------------



Nipponbare      ----------------------ATGGATCACAACATCCTAATTCCACTGGTGTCATCCCT
Pei’ai64S       AGATATATAGTGGGTGATGATGATGGATCACAACATCCTAATTCCACTGGTGTCATCCCT
9311            ----------------------ATGGATCACAACATCCTAATTCCACTGGTGTCATCCCT
                                      **************************************

Nipponbare      CATGATGTTGGTACTGGGACCATTGATCATAGATGTGATTTCGGTAAGTAATAAGATTGG
Pei’ai64S       CATGATGTTGGTACTGGGACCATTGATCATAGATGTGATTTCGGTAAGTAATAAGATTGG
9311            CATGATGTTGGTACTGGGACCATTGATCATAGATGTGATTTCGGTAAGTAAGAAGATTGG
                *************************************************** ********

Nipponbare      AAGGTTATTTAGCGCAATTGCAAGGTTCTTAGCGCATGACGATAGTGTTATCAACTCTAT
Pei’ai64S       AAGGTTATTTAGCGCAATTGCAAGGTTCTTAGCGCATGACGATAGTGTTATCAACTCTAT
9311            AAGGTTATTTAGCGCAATTGCAAGGTTCTTAGCGCATGACGATAGTGTTATCAACTCTAT
                ************************************************************

Nipponbare      GGTCGTGGACAACGACCCTCCTCCTTCTTCGCAGTTGCTTGGAGGAGGGGTGTCATGCTT
Pei’ai64S       GGTCGTGGACAACGACCCTCCTCCTTCTTCGCAGTTGCTTGGAGGAGGGGTGTCATGCTT
9311            GATCGTGGACAACGACCCTCCACCTTCTTCACAGTTGCTTGGAGGAGGGGTGTCATGCTG
                * ******************* ******** ****************************

Nipponbare      TGATGCAATGACTGTCACAACGAGGTTAGGCCTCAGGTGGCAAAGGAGTGGGGAGGCCGC
Pei’ai64S       TGATGCAATGACTGTCACAACGAGGTTAGGCCTCAGGTGGCAAAGGAGTGGGGAGGCCGC
9311            TGATGCAATGGCTGTCACAACGAGGTTAGGCCTCAGGTGGCGAAGGAGTGGGGAGGCTGC
                ********** ****************************** *************** **

Nipponbare      CATGGAGTGCCAAGGGTGTGACATCCCTATGGATGCTACCGTGGATGAGCTGTTGGATAG
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Pei’ai64S     CATGGAGTGCCAAGGGTGTGACATCCCTATGGATGCTACCGTGGATGAGCTGTTGGATAG
9311          CATGGAGTGCCAAGGGTGTGACATCCCTATGGATGCTACTGTGGATGAGCTGTTGGATAG
              *************************************** ********************

Nipponbare    GAAGATGGCGAGCGAGGGTGAGCTTAAGGATGCCTTTTATGTGTTCGATCGCAATGAGGA
Pei’ai64S     GAAGATGGCGAGCGAGGGTGAGCTTAAGGATGCCTTTTATGTGTTCGATCGCAATGAGGA
9311          GAAGATGGCGAGCGAGGATGAGCTTAAGGATGCCTTCTATGTGTTCGATCGCAATGAGGA
              ***************** ****************** ***********************

Nipponbare    TGGCTTCATATGTGCCTCGGAACTGTGGAGCGTGATGAGGAGGCTAGGGTTCAAAGAAGG
Pei’ai64S     TGGCTTCATATGTGCCTCGGAACTGTGGAGCGTGATGAGGAGGCTAGGGTTCAAAGAAGG
9311          TGGCTTCATATGCGCCTCGGAACTCTGGAGCGTGATGAGGAGGCTAGGGTTCAAAGAAGG
              ************ *********** ***********************************

Nipponbare    GCAAAGGTATGAGGACTGTATGAGGATGATCCACACCTTCGATGAGGACAGAGATGGGAG
Pei’ai64S     GCAAAGGTATGAGGACTGTATGAGGATGATCCACACCTTCGATGAGGACAGAGATGGGAG
9311          GCAAAGATATGAGGACTGTATGAGGATGATCCACACCTTCGATGAGGACAGAGATGGGAG
              ****** *****************************************************

Nipponbare    GATCAGCTACTTAGAATTTAGAAGGATGATGGAAGATGCAGTATAG--------------
Pei’ai64S     GATCAGCTACTTAGAATTTAGAAGGATGATGGAAGATGCAGTATAGTTATTAGCTAATCT
9311          GATCAGCTACTTAGAATTTAGAAGGATGATGGAAGATGCAGTATAG--------------
              **********************************************

Nipponbare    ------------------------------------------------------------
Pei’ai64S     TCCTCATTGAACCTTAATTGTCTTTCCATATTGTGGTAACATTAGTTAACTTTGGAATGT
9311          ------------------------------------------------------------


Nipponbare    ------------------------------------------
Pei’ai64S     GATGTTACATTAGACATTCTTGTAATAACATGTTGGTTGTGA
9311          ------------------------------------------
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Note: the LOC_Os07g12240 sequence of Peiai 64S is identical to that of Nipponbare. However, there are 13 single nucleotide polymorphisms between Pei'ai64S and 9311.