Supplementary Materials

Proteome-Wide Analyses Provide New Insights into the Compatible Interaction of Rice with Root-Knot Nematode *Meloidogyne graminicola*

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Figure S1. Volcano plots of the relative protein abundance changes of all the identified proteins in the roots of NPB with or without infection of *M. graminicola*.

Figure S2. Clustering heatmaps of the three biological replicates.

Figure S3. GO and KEGG enrichment analyses using all the specifically expressed proteins and SDEPs of NPB roots in CK1DPI_versus_CK0, CK3DPI_versus_CK0, or CK7DPI_versus_CK0.

Figure S4. GO and KEGG enrichment analyses of the specifically expressed proteins and SDEPs of the NPB roots in the whole CK_versus_CK0 group.

Figure S5. Compatible interaction of *japonica* rice cultivar Nipponbare (NPB) with M. graminicola.

Table S1 List of the specifically expressed proteins and significantly differentially expressed proteins (SDEPs) in the roots of rice NPB uniquely caused by the infection of *M. graminicola*.

Table S2 List of the primers used in this study.

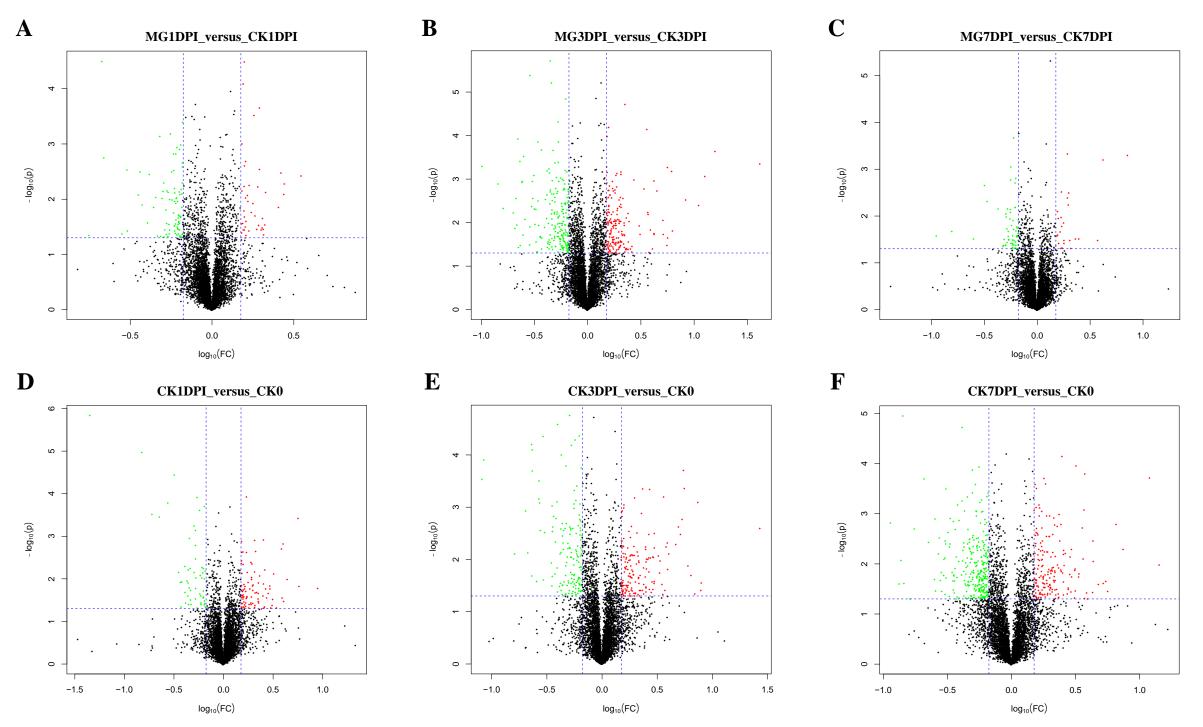


Figure S1. Volcano plots of the relative protein abundance changes of all the identified proteins in the roots of NPB with or without infection of *M. graminicola*. (A)-(F) Volcano plots of the relative protein abundance changes of all the identified proteins in MG1DPI_versus_CK1DPI, MG3DPI_versus_CK3DPI, MG7DPI_versus_CK7DPI, CK1DPI_versus_CK0, CK3DPI_versus_CK0, and CK7DPI_versus_CK0, respectively. Red and green dots indicate the proteins that are significantly up-regulated and significantly down-regulated, respectively.

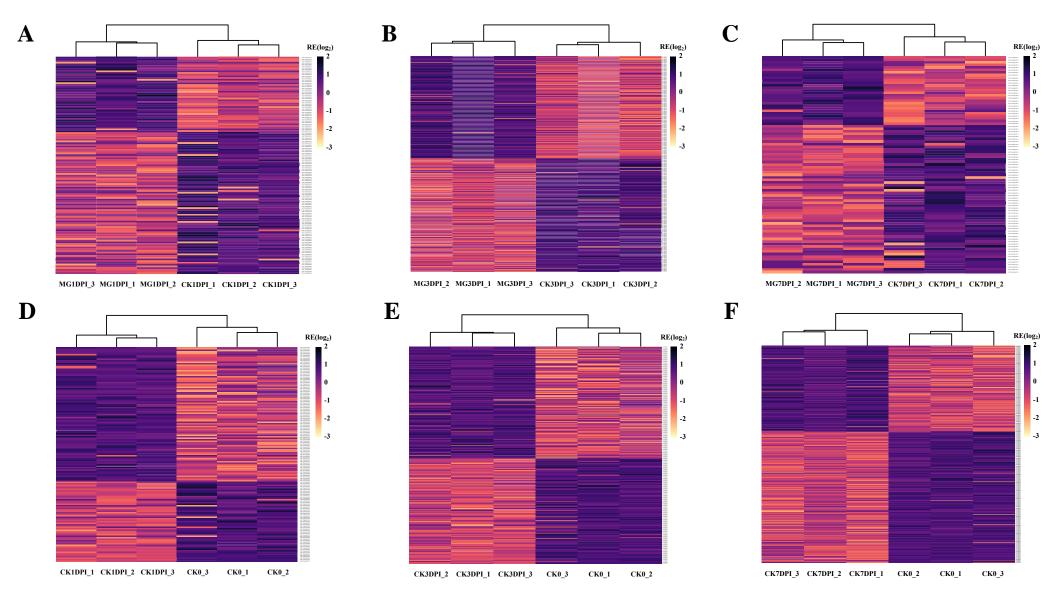


Figure S2. Clustering heatmaps of the three biological replicates. (**A**)-(**F**) Clustering heatmaps of MG1DPI_versus_CK1DPI, MG3DPI_versus_CK3DPI, MG7DPI_versus_CK7DPI, CK1DPI_versus_CK0, CK3DPI_versus_CK0, and CK7DPI_versus_CK0, respectively.

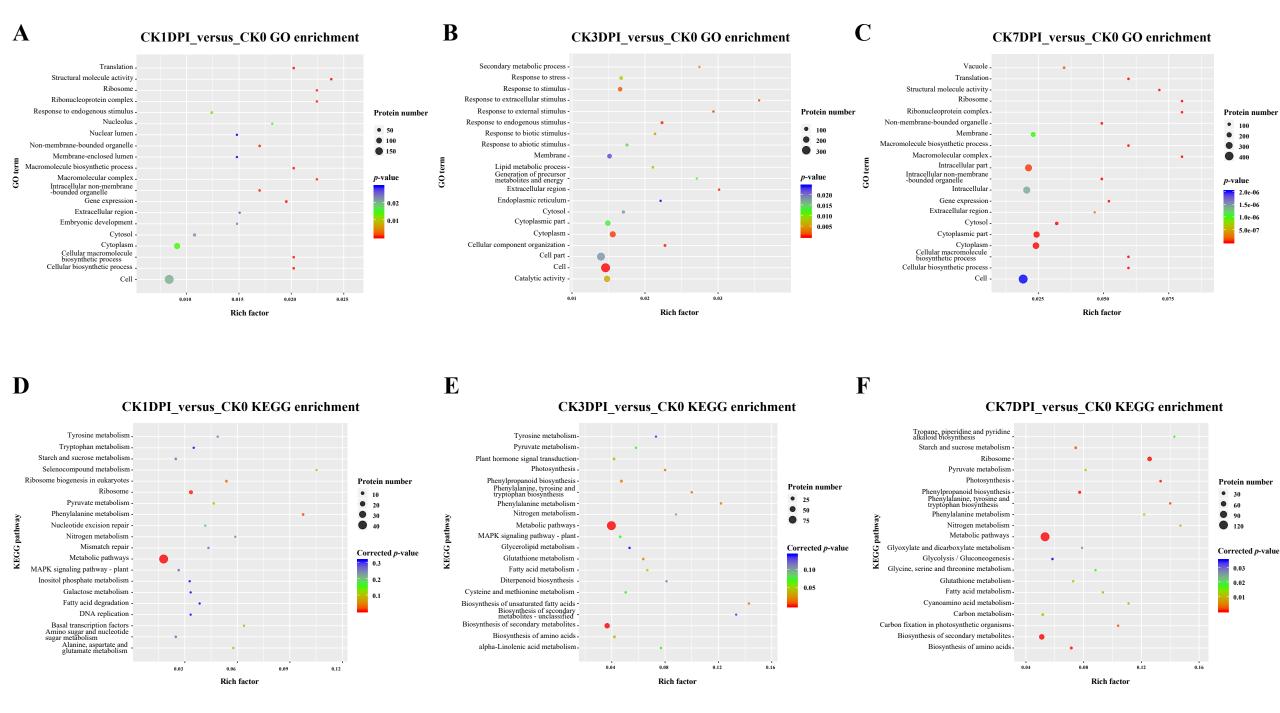


Figure S3. GO and KEGG enrichment analyses using all the specifically expressed proteins and SDEPs of NPB roots in CK1DPI_versus_CK0, CK3DPI_versus_CK0, or CK7DPI_versus_CK0. (A)-(C) GO enrichment analyses in CK1DPI_versus_CK0, CK3DPI_versus_CK0, and CK7DPI_versus_CK0, respectively. (D)-(F) KEGG enrichment analyses in CK1DPI_versus_CK0, CK3DPI_versus_CK0, and CK7DPI_versus_CK0, respectively.

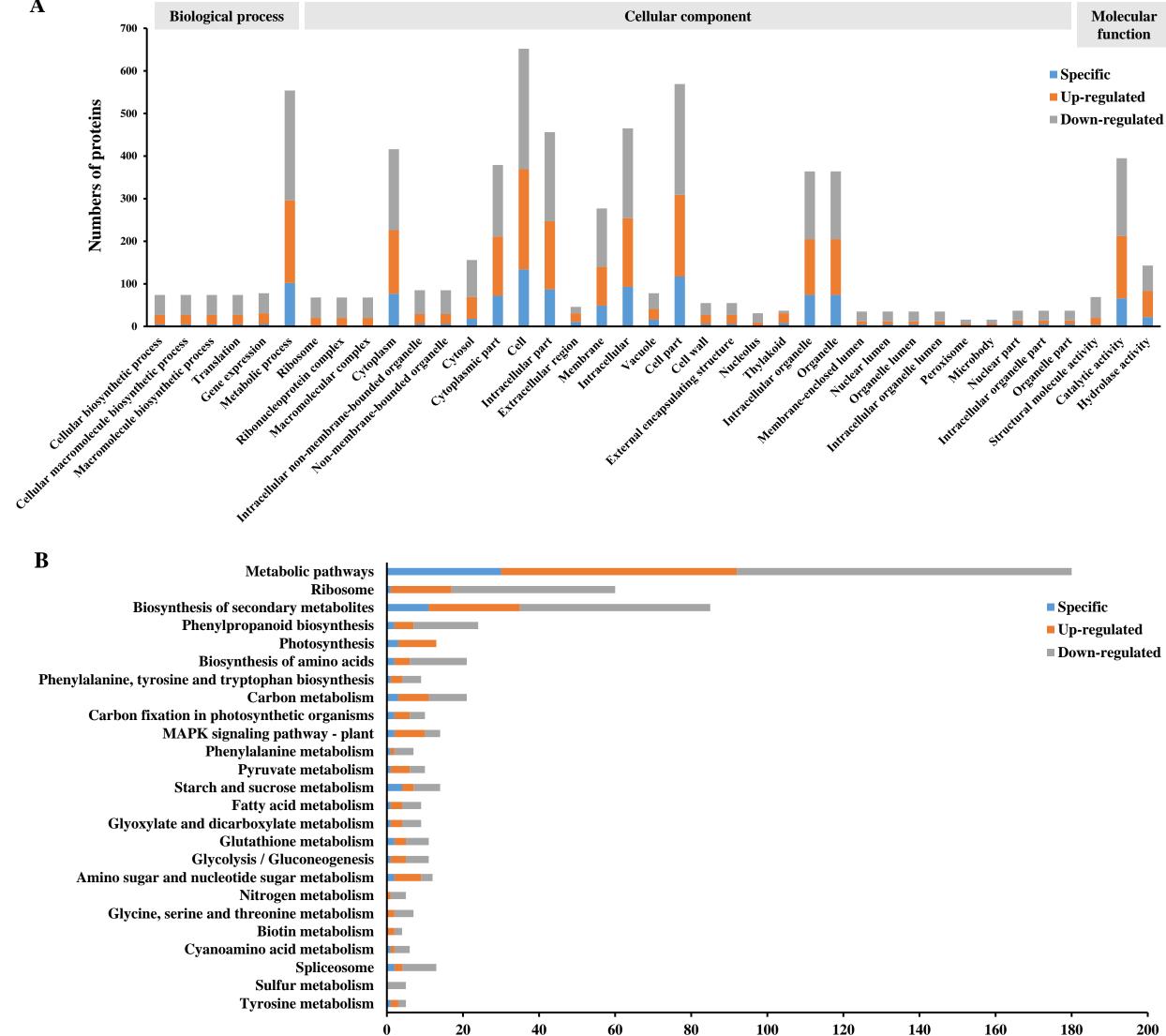


Figure S4. GO and KEGG enrichment analyses of all the specifically expressed proteins and SDEPs of the NPB roots in the whole CK_versus_CK0 group. (A) GO enrichment analyses. (B) KEGG pathway enrichment analyses.

Numbers of proteins



Figure S5. Compatible interaction of *japonica* rice cultivar Nipponbare (NPB) with *M. graminicola*. (A) Partial seedlings of NPB at 7 dpi of *M. graminicola*. Left and right pictures are the partial seedlings with and without inoculation, respectively. Many galls (red arrows directed) already emerged on the roots inoculated with *M. graminicola* at 7 dpi, but no galls appeared on the non-inoculated roots at the same growth day. (B) One representative gall on the roots with 3 stained nematodes (purple) inside observed under a stereomicroscopy at 7 dpi.

Table S1 List of the specifically expressed proteins and significantly differentially expressed proteins (SDEPs) in the roots of rice NPB uniquely caused by the infection of *M. graminicola*. Totally, 513 proteins were obtained. 'Specific', 'Up' and 'Down' denote specifically expressed proteins, up-regulated SDEPs and down-regulated SDEPs, respectively. The former 99 proteins were enriched on the KEGG pathways. The blue-highlighted are the speciallyselected proteins.

| No. | Accession No. | Description | Gene ID | Expression | KEGG pathway |
|-----|------------------|--|--------------------------|----------------------|---|
| 1 | LOC_Os12g08780.1 | flavin monooxygenase, putative, expressed | dosa:Os12t01895 00-00 | Specific | Tryptophan metabolism;Metabolic pathways |
| 2 | LOC_Os03g16210.1 | tropinone reductase, putative, expressed | osa:4332375 | Specific and Down | Tropane, piperidine and pyridine alkaloid biosynthesis;Metabolic pathways;Biosynthesis of secondary metabolites |
| 3 | LOC_Os11g25160.1 | tropinone reductase 2, putative, expressed | dosa:Os11t04387 00-01 | Down | Tropane, piperidine and pyridine alkaloid biosynthesis;Metabolic pathways;Biosynthesis of secondary metabolites |
| 4 | LOC_Os12g09000.1 | phosphomethylpyrimidine kinase/thiamin- phosphate pyrophosphorylase, putative, expressed | osa:4351707 | Specific | Thiamine metabolism;Metabolic pathways |
| 5 | LOC_Os05g30454.1 | thiamin pyrophosphokinase 1, putative, expressed | osa:4338566 | Down | Thiamine metabolism;Metabolic pathways |
| 6 | LOC_Os03g52180.1 | 4-hydroxy-3-methylbut-2-enyl diphosphate reductase, putative, expressed | osa:4334004 | Specific | Terpenoid backbone biosynthesis;Metabolic pathways;Biosynthesis of secondary metabolites |
| 7 | LOC_Os05g34180.1 | hydrolase, NUDIX family, domain containing protein, expressed | osa:4338791 | Up | Terpenoid backbone biosynthesis;Metabolic pathways;Biosynthesis of secondary metabolites |
| 8 | LOC_Os01g66360.1 | 2-C-methyl-D-erythritol 4-phosphate cytidylyltransferase, putative, expressed | osa:9266653 | Down | Terpenoid backbone biosynthesis;Metabolic pathways;Biosynthesis of secondary metabolites |
| 9 | LOC_Os01g05810.1 | gamma-glutamyltranspeptidase 1 precursor, putative, expressed | osa:4324525 | Up | Taurine and hypotaurine metabolism;Cyanoamino acid metabolism;Glutathione metabolism;Arachidonic acid metabolism;Metabolic pathways |
| 10 | LOC_Os03g59040.2 | squalene synthetase, putative, expressed | osa:4334492 | Down | Steroid biosynthesis;Sesquiterpenoid and triterpenoid biosynthesis;Metabolic pathways;Biosynthesis of secondary metabolites |
| 11 | LOC_Os06g49970.2 | alpha-amylase precursor, putative, expressed | osa:4342055 | Up and Down | Starch and sucrose metabolism;Metabolic pathways |
| 12 | LOC_Os07g32600.1 | glucan endo-1,3-beta-glucosidase precursor, putative, expressed | osa:4343350 | Specific | Starch and sucrose metabolism;Metabolic pathways |
| 13 | LOC_Os02g47350.1 | oxidoreductase, short chain dehydrogenase/reductase family, putative, expressed | osa:4330439 | Up | Sphingolipid metabolism;Metabolic pathways |
| 14 | LOC_Os03g02600.1 | riboflavin biosynthesis protein ribD, putative, expressed | dosa:Os03t01172 00-01 | Down | Riboflavin metabolism;Metabolic pathways;Biosynthesis of secondary metabolites |

| 15 | LOC_Os01g11054.1 | phosphoenolpyruvate carboxylase, putative, expressed | osa:4325531 | Down | Pyruvate metabolism;Carbon fixation in photosynthetic organisms;Metabolic pathways;Carbon metabolism |
|----|---------------------------|--|--------------------------|-------------|---|
| 16 | LOC_Os03g31750.3 | pyruvate, phosphate dikinase, chloroplast precursor, putative, expressed | osa:4333181 | Down | Pyruvate metabolism;Carbon fixation in photosynthetic organisms;Metabolic pathways;Carbon metabolism |
| 17 | LOC_Os01g70950.1 | spermatogenesis-associated protein 20 precursor, putative, expressed | osa:4326794 | Up | Pyrimidine metabolism;Metabolic pathways |
| 18 | LOC_Os06g02000.1 | adenylate kinase, putative, expressed | osa:4339882 | Down | Pyrimidine metabolism;Metabolic pathways |
| 19 | LOC_Os03g44660.1 | cytosolic 5-nucleotidase III, putative, expressed | osa:4333582 | Down | Purine metabolism;Pyrimidine metabolism;Nicotinate and nicotinamide metabolism;Metabolic pathways;Biosynthesis of secondary metabolites |
| 20 | LOC_Os05g08950.1 | phosphoribosyl transferase, putative, expressed | osa:107276353 | Up | Purine metabolism;Metabolic pathways;Biosynthesis of secondary metabolites |
| 21 | LOC_Os01g64520.1 | uricase, putative, expressed | osa:4324793 | Down | Purine metabolism;Metabolic pathways |
| 22 | LOC_Os05g06940.1 | relA-SpoT like protein RSH4, putative, expressed | osa:9270381 | Specific | Purine metabolism;Metabolic pathways |
| 23 | LOC_Os01g07770.1 | peroxidase precursor, putative, expressed | osa:4327648 | Up and Down | Phenylpropanoid biosynthesis;Metabolic pathways;Biosynthesis of secondary metabolites |
| 24 | LOC_Os12g08920.1 | peroxidase precursor, putative, expressed | dosa:Os12t01915 00-01 | Up and Down | Phenylpropanoid biosynthesis;Metabolic pathways;Biosynthesis of secondary metabolites |
| 25 | LOC_Os11g40690.1 | dehydrogenase, putative, expressed | dosa:Os11t06228 00-00 | Up and Down | Phenylpropanoid biosynthesis;Metabolic pathways;Biosynthesis of secondary metabolites |
| 26 | LOC_Os05g04500.1 | peroxidase precursor, putative, expressed | osa:4337732 | Up | Phenylpropanoid biosynthesis;Metabolic pathways;Biosynthesis of secondary metabolites |
| 27 | LOC_Os09g23530.1 | dehydrogenase, putative, expressed | osa:4346988 | Up | Phenylpropanoid biosynthesis;Metabolic pathways;Biosynthesis of secondary metabolites |
| 28 | LOC_Os03g25280.1 | peroxidase precursor, putative, expressed | dosa:Os03t03680 00-00 | Down | Phenylpropanoid biosynthesis;Metabolic pathways;Biosynthesis of secondary metabolites |
| 29 | LOC_Os07g01410.1 | peroxidase precursor, putative, expressed | sita:101755700 | Down | Phenylpropanoid biosynthesis;Metabolic pathways;Biosynthesis of secondary metabolites |
| 30 | LOC_Os01g73200.1 | peroxidase precursor, putative, expressed | osa:4324556 | Down | Phenylpropanoid biosynthesis;Metabolic pathways;Biosynthesis of secondary metabolites |
| 31 | LOC_Os09g23560.1 (CAD) | dehydrogenase, putative, expressed | osa:4346993 | Down | Phenylpropanoid biosynthesis;Metabolic pathways;Biosynthesis of secondary metabolites |

| | | | | | Phenylpropanoid |
|----|------------------|--|--------------------------|-------------|--|
| 32 | LOC_Os02g14160.1 | peroxidase precursor, putative, expressed | osa:4328832 | Down | biosynthesis;Metabolic pathways;Biosynthesis of secondary metabolites |
| 33 | LOC_Os03g22020.1 | peroxidase precursor, putative, expressed | osa:9272450 | Down | Phenylpropanoid biosynthesis;Metabolic pathways;Biosynthesis of secondary metabolites |
| 34 | LOC_Os03g25320.1 | peroxidase precursor, putative, expressed | sita:101771235 | Down | Phenylpropanoid biosynthesis;Metabolic pathways;Biosynthesis of secondary metabolites |
| 35 | LOC_Os06g06980.1 | caffeoyl-CoA O-methyltransferase, putative, expressed | osa:4340240 | Down | Phenylpropanoid biosynthesis;Flavonoid biosynthesis;Stilbenoid, diarylheptanoid and gingerol biosynthesis;Metabolic pathways;Biosynthesis of secondary metabolites;Biosynthesis of secondary metabolites - unclassified |
| 36 | LOC_Os04g33390.1 | prephenate dehydratase domain containing protein, expressed | osa:4335756 | Down | Phenylalanine, tyrosine and tryptophan biosynthesis;Metabolic pathways;Biosynthesis of secondary metabolites;Biosynthesis of amino acids |
| 37 | LOC_Os08g43370.1 | 6-phosphogluconolactonase, putative, expressed | osa:4346232 | Down | Pentose phosphate pathway;Metabolic pathways;Biosynthesis of secondary metabolites;Carbon metabolism |
| 38 | LOC_Os07g08030.1 | ribose-5-phosphate isomerase A, putative, expressed | osa:4342543 | Up | Pentose phosphate pathway;Carbon fixation in photosynthetic organisms;Metabolic pathways;Biosynthesis of secondary metabolites;Carbon metabolism;Biosynthesis of amino acids |
| 39 | LOC_Os02g54880.1 | cytochrome c oxidase subunit, putative, expressed | osa:4330974 | Specific | Oxidative phosphorylation;Metabolic pathways |
| 40 | LOC_Os05g45730.1 | ubiquinone oxidoreductase, putative, expressed | osa:4339427 | Up | Oxidative phosphorylation;Metabolic pathways |
| 41 | LOC_Os07g31300.1 | ATP synthase delta chain, mitochondrial precursor, putative, expressed | osa:4343288 | Up | Oxidative phosphorylation;Metabolic pathways |
| 42 | LOC_Os08g01940.1 | non-lysosomal glucosylceramidase, putative, expressed | dosa:Os08t01112 00-01 | Up and Down | Other glycan degradation;Sphingolipid metabolism;Metabolic pathways |
| 43 | LOC_Os03g60700.1 | dolichyl-phosphate beta-glycosyltransferase, putative, expressed | osa:4334604 | Up | N-Glycan biosynthesis;Metabolic pathways |
| 44 | LOC_Os11g47520.1 | glycosyl hydrolase, putative, expressed | osa:4351187 | Up | Metabolic pathways;Amino sugar and nucleotide sugar metabolism |
| 45 | LOC_Os05g15770.1 | glycosyl hydrolase, putative, expressed | osa:4338208 | Up | Metabolic pathways;Amino sugar and nucleotide sugar metabolism |
| 46 | LOC_Os11g47560.1 | glycosyl hydrolase, putative, expressed | osa:4351191 | Down | Metabolic pathways;Amino sugar and nucleotide sugar metabolism |

| 47 | LOC_Os01g33230.1 | UDP-N-acetylglucosamineN-acetylmuramyl- pyrophosphor yl-undecaprenol N- acetylglucosamine transferase, putative, expressed | dosa:Os01t05167 00-01 | Specific and Down | Metabolic pathways |
|----|------------------|---|--------------------------|----------------------|---|
| 48 | LOC_Os02g54254.1 | saccharopine dehydrogenase, putative, expressed | osa:4330940 | Down | Lysine degradation;Metabolic pathways;Biosynthesis of secondary metabolites |
| 49 | LOC_Os03g09250.1 | inositol-3-phosphate synthase, putative, expressed | osa:4331917 | Down | Inositol phosphate metabolism;Metabolic pathways |
| 50 | LOC_Os02g33710.1 | decarboxylase, putative, expressed | osa:4329593 | Down | Histidine metabolism;Metabolic pathways;Biosynthesis of secondary metabolites |
| 51 | LOC_Os03g57220.1 | hydroxyacid oxidase 1, putative, expressed | dosa:Os03t07861 00-01 | Up | Glyoxylate and dicarboxylate metabolism;Metabolic pathways;Biosynthesis of secondary metabolites;Carbon metabolism;Peroxisome |
| 52 | LOC_Os04g58710.1 | AMP-binding domain containing protein, expressed | osa:4337447 | Down | Glyoxylate and dicarboxylate metabolism;Metabolic pathways |
| 53 | LOC_Os01g67960.1 | GPI transamidase component PIG-S-related, putative, expressed | osa:4324979 | Up | Glycosylphosphatidylinositol (GPI)- anchor biosynthesis;Metabolic pathways |
| 54 | LOC_Os04g33190.1 | AMP-binding enzyme, putative, expressed | osa:4335745 | Down | Glycolysis / Gluconeogenesis;Pyruvate metabolism;Propanoate metabolism;Metabolic pathways;Biosynthesis of secondary metabolites;Carbon metabolism;Glyoxylate and dicarboxylate metabolism |
| 55 | LOC_Os02g51590.1 | phosphoglycerate mutase, putative, expressed | osa:4330747 | Up | Glycolysis / Gluconeogenesis;Glycine, serine and threonine metabolism;Metabolic pathways;Biosynthesis of secondary metabolites;Carbon metabolism;Biosynthesis of amino acids |
| 56 | LOC_Os04g38540.1 | aldose 1-epimerase, putative, expressed | osa:4336039 | Specific | Glycolysis / Gluconeogenesis;Galactose metabolism;Metabolic pathways;Biosynthesis of secondary metabolites |
| 57 | LOC_Os11g10480.1 | dehydrogenase, putative, expressed | osa:4350053 | Down | Glycolysis / Gluconeogenesis;Fatty acid degradation;Tyrosine metabolism;alpha- Linolenic acid metabolism;Metabolic pathways;Biosynthesis of secondary metabolites |
| 58 | LOC_Os04g20164.2 | amine oxidase precursor, putative, expressed | dosa:Os04t02696 00-01 | Up | Glycine, serine and threonine metabolism;Tyrosine metabolism;Phenylalanine metabolism;beta-Alanine metabolism;Isoquinoline alkaloid biosynthesis;Tropane, piperidine and pyridine alkaloid biosynthesis;Metabolic pathways;Biosynthesis of secondary metabolites |
| 59 | LOC_Os09g26700.1 | choline/ethanolamine kinase, putative, expressed | osa:4347160 | Down | Glycerophospholipid metabolism;Metabolic pathways |

| 60 | LOC_Os03g27370.1 | phospholipase D, putative, expressed | obr:102711051 | Down | Glycerophospholipid metabolism;Ether lipid metabolism;Metabolic pathways;Biosynthesis of secondary metabolites;Endocytosis |
|----------|--------------------------------------|--|----------------------------|--------------|---|
| 61 | LOC_Os03g50030.1 | phospholipase A2, putative, expressed | osa:4333862 | Specific | Glycerophospholipid metabolism;Ether lipid metabolism;Arachidonic acid metabolism;Linoleic acid metabolism;alpha-Linolenic acid metabolism;Metabolic pathways;Biosynthesis of secondary metabolites |
| 62 | LOC_Os01g49820.1 | lipid phosphatase protein, putative, expressed | osa:4325649 | Down | Glycerolipid metabolism;Glycerophospholipid metabolism;Biosynthesis of secondary metabolites |
| 63 | LOC_Os03g17480.1 | IN2-1 protein, putative, expressed | osa:4332456 | Up and Down | Glutathione metabolism;Metabolic pathways |
| 64 | LOC_Os07g28480.1 | glutathione S-transferase, putative, expressed | osa:4343183 | Up | Glutathione metabolism;Metabolic pathways |
| 65 | LOC_Os10g38670.1 | glutathione S-transferase, putative, expressed | dosa:Os10t05302 00-01 | Up | Glutathione metabolism;Metabolic pathways |
| 66 | LOC_Os10g38489.1 | glutathione S-transferase GSTU6, putative, expressed | dosa:Os10t05284 00-01 | Up | Glutathione metabolism;Metabolic pathways |
| 67 | LOC_Os10g38350.1 | glutathione S-transferase, putative, expressed | osa:4349185 | Up | Glutathione metabolism;Metabolic pathways |
| 68 | LOC_Os10g38730.1 | glutathione S-transferase, putative, expressed | obr:102711734 | Up | Glutathione metabolism;Metabolic pathways |
| 69 | LOC_Os03g39850.1 (GST) | glutathione S-transferase, putative, expressed | osa:4333371 | Down | Glutathione metabolism;Metabolic pathways |
| | | | | | |
| 70 | LOC_Os04g56930.1 | glycosyl hydrolases, putative, expressed | osa:4337313 | Down | Galactose metabolism;Starch and sucrose metabolism;Metabolic pathways |
| 70 71 | LOC_Os04g56930.1 LOC_Os05g51670.1 | glycosyl hydrolases, putative, expressed NAD dependent epimerase/dehydratase family protein, putative, expressed | osa:4337313 osa:4339812 | Down Down | sucrose metabolism;Metabolic |
| | - | NAD dependent epimerase/dehydratase family | | | sucrose metabolism;Metabolic pathways Galactose metabolism;Amino sugar and nucleotide sugar metabolism;Metabolic |
| 71 | LOC_Os05g51670.1 | NAD dependent epimerase/dehydratase family protein, putative, expressed hydrolase, NUDIX family, domain containing | osa:4339812 | Down | sucrose metabolism;Metabolic pathways Galactose metabolism;Amino sugar and nucleotide sugar metabolism;Metabolic pathways Fructose and mannose metabolism;Purine metabolism;Starch and sucrose metabolism;Metabolic pathways;Biosynthesis of secondary |
| 71 | LOC_Os05g51670.1 | NAD dependent epimerase/dehydratase family protein, putative, expressed hydrolase, NUDIX family, domain containing protein, expressed | osa:4339812 osa:4339996 | Down Down | sucrose metabolism;Metabolic pathways Galactose metabolism;Amino sugar and nucleotide sugar metabolism;Metabolic pathways Fructose and mannose metabolism;Purine metabolism;Starch and sucrose metabolism;Metabolic pathways;Biosynthesis of secondary metabolites Fatty acid elongation;Biosynthesis of unsaturated fatty acids;Biosynthesis of secondary metabolites;Fatty acid |

| 76 | LOC_Os04g09900.1 | ent-kaurene synthase, chloroplast precursor, putative, expressed | osa:4335090 | Up | Diterpenoid biosynthesis;Biosynthesis of secondary metabolites |
|----|------------------|--|-------------|----------|--|
| 77 | LOC_Os01g22010.4 | S-adenosylmethionine synthetase, putative, expressed | osa:4326996 | Down | Cysteine and methionine metabolism;Metabolic pathways;Biosynthesis of secondary metabolites;Biosynthesis of amino acids |
| 78 | LOC_Os05g04510.1 | S-adenosylmethionine synthetase, putative, expressed | osa:4337733 | Down | Cysteine and methionine metabolism;Metabolic pathways;Biosynthesis of secondary metabolites;Biosynthesis of amino acids |
| 79 | LOC_Os12g41390.1 | homocysteine S-methyltransferase protein, putative, expressed | osa:4352747 | Up | Cysteine and methionine metabolism;Metabolic pathways;Biosynthesis of secondary metabolites |
| 80 | LOC_Os11g08380.1 | 1-aminocyclopropane-1-carboxylate oxidase, putative, expressed | osa:4349970 | Up | Cysteine and methionine metabolism;Metabolic pathways;Biosynthesis of secondary metabolites |
| 81 | LOC_Os05g05680.1 | 1-aminocyclopropane-1-carboxylate oxidase, putative, expressed | osa:4337818 | Down | Cysteine and methionine metabolism;Metabolic pathways;Biosynthesis of secondary metabolites |
| 82 | LOC_Os10g17650.1 | Os10bglu34 - beta-glucosidase homologue, similar to Os3bglu6, expressed | osa:4348315 | Down | Cyanoamino acid metabolism;Starch and sucrose metabolism;Phenylpropanoid biosynthesis;Metabolic pathways;Biosynthesis of secondary metabolites |
| 83 | LOC_Os11g33240.1 | citrate synthase, putative, expressed | osa:4350660 | Specific | Citrate cycle (TCA cycle);Glyoxylate and dicarboxylate metabolism;Metabolic pathways;Biosynthesis of secondary metabolites;Carbon metabolism;2- Oxocarboxylic acid metabolism;Biosynthesis of amino acids |
| 84 | LOC_Os02g47020.1 | phosphoribulokinase/Uridine kinase family protein, expressed | osa:4330413 | Specific | Carbon fixation in photosynthetic organisms;Metabolic pathways;Carbon metabolism |
| 85 | LOC_Os04g16680.1 | fructose-1,6-bisphosphatase, putative, expressed | osa:4335227 | Down | Carbon fixation in photosynthetic organisms;Metabolic pathways;Carbon metabolism |
| 86 | LOC_Os02g48560.1 | fatty acid desaturase, putative, expressed | osa:4330523 | Down | Biosynthesis of unsaturated fatty acids;Fatty acid metabolism;Metabolic pathways |
| 87 | LOC_Os09g23070.1 | malonyl-CoA decarboxylase, mitochondrial precursor, putative, expressed | osa:4346967 | Down | beta-Alanine metabolism;Propanoate metabolism;Metabolic pathways;Peroxisome |
| 88 | LOC_Os12g29760.1 | oxidoreductase, aldo/keto reductase family protein, putative, expressed | osa:4352223 | Down | Ascorbate and aldarate metabolism;Metabolic pathways;Biosynthesis of secondary metabolites |
| 89 | LOC_Os06g37080.1 | L-ascorbate oxidase precursor, putative, expressed | osa:4341335 | Down | Ascorbate and aldarate metabolism;Metabolic pathways |

| 90 | LOC_Os03g08530.1 | aminotransferase, classes I and II, domain containing protein, expressed | dosa:Os03t01836 00-00 | Down | Arginine biosynthesis;Alanine, aspartate and glutamate metabolism;Carbon fixation in photosynthetic organisms;Metabolic pathways;Carbon metabolism;2- Oxocarboxylic acid metabolism;Biosynthesis of amino acids |
|-----|----------------------------|---|--------------------------|----------|--|
| 91 | LOC_Os04g01690.1 | pyridoxal-dependent decarboxylase protein, putative, expressed | osa:4334917 | Up | Arginine and proline metabolism;Metabolic pathways |
| 92 | LOC_Os07g04690.1 | UDP-arabinose 4-epimerase 1, putative, expressed | osa:4342364 | Down | Amino sugar and nucleotide sugar metabolism;Metabolic pathways |
| 93 | LOC_Os01g62020.1 | NAD dependent epimerase/dehydratase family domain containing protein, expressed | osa:4327367 | Down | Amino sugar and nucleotide sugar metabolism;Metabolic pathways |
| 94 | LOC_Os12g03470.1 | alpha-N-arabinofuranosidase A, putative, expressed | osa:4351401 | Down | Amino sugar and nucleotide sugar metabolism;Metabolic pathways |
| 95 | LOC_Os06g11240.1 | 12-oxophytodienoate reductase, putative, expressed | osa:4340486 | Specific | alpha-Linolenic acid metabolism;Metabolic pathways;Biosynthesis of secondary metabolites |
| 96 | LOC_Os03g04000.1 | AMP-binding domain containing protein, expressed | osa:4331515 | Up | alpha-Linolenic acid metabolism;Metabolic pathways;Biosynthesis of secondary metabolites |
| 97 | LOC_Os02g12690.1 | cytochrome P450, putative, expressed | osa:4328743 | Up | alpha-Linolenic acid metabolism;Metabolic pathways;Biosynthesis of secondary metabolites |
| 98 | LOC_Os08g39300.1 | aminotransferase, putative, expressed | osa:4345962 | Down | Alanine, aspartate and glutamate metabolism;Glycine, serine and threonine metabolism;Glyoxylate and dicarboxylate metabolism;Metabolic pathways;Biosynthesis of secondary metabolites;Carbon metabolism;Peroxisome |
| 99 | LOC_0s08g36320.3 | decarboxylase, putative, expressed | dosa:Os08t04658 00-01 | Up | Alanine, aspartate and glutamate metabolism;beta-Alanine metabolism;Taurine and hypotaurine metabolism;Butanoate metabolism;Metabolic pathways;Biosynthesis of secondary metabolites |
| 100 | LOC_Os08g35860.1 | cytokinin dehydrogenase precursor, putative, expressed | osa:4345764 | Down | Zeatin biosynthesis |
| 101 | LOC_Os03g57790.1 | ubiquitin-conjugating enzyme, putative, expressed | osa:4334386 | Down | Ubiquitin mediated proteolysis |
| 102 | LOC_Os03g04520.2 | RNA recognition motif containing protein, putative, expressed | osa:4331556 | Specific | Spliceosome |
| 103 | LOC_Os08g29650.1 | RNA recognition motif containing protein, expressed | osa:4345455 | Up | Spliceosome |
| 104 | LOC_Os07g47630.1 | RNA recognition motif containing protein, expressed | dosa:Os07t06735 00-01 | Up | Spliceosome |
| 105 | LOC_Os10g06540.1 (VAMP) | vesicle-associated membrane protein, putative, expressed | osa:4348130 | Down | SNARE interactions in vesicular transport |
| 106 | LOC_Os03g05020.1 | PIR, putative, expressed | osa:4331593 | Down | RNA transport |
| 107 | LOC_Os10g40040.1 | expressed protein | osa:4349298 | Specific | RNA degradation |

| 100 | | | | | |
|---|--|--|---|--|---|
| 108 | LOC_Os11g43890.1 | WD domain, G-beta repeat domain containing protein, expressed | osa:4351059 | Up | RNA degradation |
| 109 | LOC_Os01g56190.1 | HVT1, putative, expressed | dosa:Os01t07677 00-01 | Down | RNA degradation |
| 110 | LOC_Os10g42320.1 | nonsense-mediated mRNA decay protein 3, putative, expressed | osa:4349477 | Down | Ribosome biogenesis in eukaryotes;RNA transport |
| 111 | LOC_Os03g20100.1 | S1 RNA binding domain containing protein, expressed | osa:4332652 | Specific | Ribosome |
| 112 | LOC_Os02g10540.1 | ribosomal protein L7/L12 C-terminal domain containing protein, expressed | osa:4328635 | Up | Ribosome |
| 113 | LOC_Os03g40180.1 | 60S ribosomal protein L15, putative, expressed | osa:9266562 | Down | Ribosome |
| 114 | LOC_Os01g54870.1 | 60S ribosomal protein L18a, putative, expressed | osa:4327004 | Down | Ribosome |
| 115 | LOC_Os07g43310.1 | ribosomal protein L7/L12 C-terminal domain containing protein, expressed | bdi:100837964 | Down | Ribosome |
| 116 | LOC_Os07g14270.1 | calreticulin precursor protein, putative, expressed | osa:4342826 | Up | Protein processing in endoplasmic reticulum;Phagosome |
| 117 | LOC_Os04g36750.1 | hsp20/alpha crystallin family protein, putative, expressed | osa:4335956 | Down | Protein processing in endoplasmic reticulum |
| 118 | LOC_Os01g04330.1 | OsCML16 - Calmodulin-related calcium sensor protein, expressed | osa:4325693 | Up | Plant-pathogen interaction |
| 119 | LOC_Os02g46090.1 (CDPK) | CAMK_CAMK_like.15 - CAMK includes calcium/calmodulin depedent protein kinases, expressed | osa:4330351 | Down | Plant-pathogen interaction |
| 120 | LOC_Os04g47300.1 | CAMK_CAMK_like.26 - CAMK includes calcium/calmodulin depedent protein kinases, expressed | osa:4336653 | Down | Plant-pathogen interaction |
| 121 | LOC_Os11g11960.1 (RPM1) | disease resistance protein RPM1, putative, expressed | osa:9267892 | Down | Plant-pathogen interaction |
| 122 | LOC_Os09g39400.1 | histidine-containing phosphotransfer protein, | osa:4347886 | Specific | Plant hormone signal transduction |
| | _ 8 | putative, expressed | | ~ | i fant normone signal transduction |
| 123 | LOC_Os03g50860.1 | putative, expressed histidine kinase, putative, expressed | osa:4333916 | Specific | Plant hormone signal transduction |
| | - | | | - | - |
| 124 | LOC_Os03g50860.1 | histidine kinase, putative, expressed BTBA2 - Bric-a-Brac,Tramtrack, Broad Complex BTB domain with Ankyrin repeat | osa:4333916 | Specific | Plant hormone signal transduction |
| 124 125 | LOC_Os03g50860.1 | histidine kinase, putative, expressed BTBA2 - Bric-a-Brac,Tramtrack, Broad Complex BTB domain with Ankyrin repeat region, expressed | osa:4333916 osa:4325503 | Specific Specific | Plant hormone signal transduction |
| 124 125 126 | LOC_Os03g50860.1 LOC_Os01g56200.1 LOC_Os11g05480.1 | histidine kinase, putative, expressed BTBA2 - Bric-a-Brac,Tramtrack, Broad Complex BTB domain with Ankyrin repeat region, expressed transcription factor, putative, expressed tubulin/FtsZ domain containing protein, | osa:4333916 osa:4325503 osa:4349800 | Specific Specific Up | Plant hormone signal transduction Plant hormone signal transduction Plant hormone signal transduction |
| 124 125 126 | LOC_Os03g50860.1 LOC_Os01g56200.1 LOC_Os11g05480.1 LOC_Os01g59150.2 LOC_Os03g01530.1 LOC_Os01g18050.1 | histidine kinase, putative, expressed BTBA2 - Bric-a-Brac,Tramtrack, Broad Complex BTB domain with Ankyrin repeat region, expressed transcription factor, putative, expressed tubulin/FtsZ domain containing protein, putative, expressed tubulin/FtsZ domain containing protein, | osa:4333916 osa:4325503 osa:4349800 osa:4327550 | Specific Specific Up Up | Plant hormone signal transduction Plant hormone signal transduction Plant hormone signal transduction Phagosome |
| 124 125 126 127 | LOC_Os03g50860.1 LOC_Os01g56200.1 LOC_Os11g05480.1 LOC_Os01g59150.2 LOC_Os03g01530.1 | histidine kinase, putative, expressed BTBA2 - Bric-a-Brac,Tramtrack, Broad Complex BTB domain with Ankyrin repeat region, expressed transcription factor, putative, expressed tubulin/FtsZ domain containing protein, putative, expressed tubulin/FtsZ domain containing protein, putative, expressed tubulin/FtsZ domain containing protein, | osa:4333916 osa:4325503 osa:4349800 osa:4327550 osa:4331315 | Specific Specific Up Up Up | Plant hormone signal transduction Plant hormone signal transduction Plant hormone signal transduction Phagosome Phagosome |
| 124 125 126 127 128 | LOC_Os03g50860.1 LOC_Os01g56200.1 LOC_Os11g05480.1 LOC_Os01g59150.2 LOC_Os03g01530.1 LOC_Os01g18050.1 LOC_Os09g14510.1 | histidine kinase, putative, expressed BTBA2 - Bric-a-Brac,Tramtrack, Broad Complex BTB domain with Ankyrin repeat region, expressed transcription factor, putative, expressed tubulin/FtsZ domain containing protein, putative, expressed tubulin/FtsZ domain containing protein, putative, expressed tubulin/FtsZ domain containing protein, putative, expressed | osa:4333916 osa:4325503 osa:4349800 osa:4327550 osa:4331315 osa:4326917 | Specific Specific Up Up Up Up | Plant hormone signal transduction Plant hormone signal transduction Plant hormone signal transduction Phagosome Phagosome Phagosome |
| 124 125 126 127 128 129 | LOC_Os03g50860.1 LOC_Os01g56200.1 LOC_Os11g05480.1 LOC_Os01g59150.2 LOC_Os03g01530.1 LOC_Os01g18050.1 LOC_Os09g14510.1 (PEX3) | histidine kinase, putative, expressed BTBA2 - Bric-a-Brac,Tramtrack, Broad Complex BTB domain with Ankyrin repeat region, expressed transcription factor, putative, expressed tubulin/FtsZ domain containing protein, putative, expressed tubulin/FtsZ domain containing protein, putative, expressed tubulin/FtsZ domain containing protein, putative, expressed peroxin-3 family protein, putative, expressed soluble inorganic pyrophosphatase, putative, | osa:4333916 osa:4325503 osa:4349800 osa:4327550 osa:4331315 osa:4326917 osa:4346691 | Specific Specific Up Up Up Up Down | Plant hormone signal transduction Plant hormone signal transduction Plant hormone signal transduction Phagosome Phagosome Phagosome Phagosome |
| 124 125 126 127 128 129 130 | LOC_Os03g50860.1 LOC_Os01g56200.1 LOC_Os11g05480.1 LOC_Os01g59150.2 LOC_Os03g01530.1 LOC_Os03g01530.1 LOC_Os01g18050.1 LOC_Os09g14510.1 (PEX3) | histidine kinase, putative, expressed BTBA2 - Bric-a-Brac,Tramtrack, Broad Complex BTB domain with Ankyrin repeat region, expressed transcription factor, putative, expressed tubulin/FtsZ domain containing protein, putative, expressed tubulin/FtsZ domain containing protein, putative, expressed tubulin/FtsZ domain containing protein, putative, expressed tubulin/FtsZ domain containing protein, putative, expressed soluble inorganic pyrophosphatase, putative, expressed 3-oxo-5-alpha-steroid 4-dehydrogenase, | osa:4333916 osa:4325503 osa:4349800 osa:4327550 osa:4331315 osa:4326917 osa:4346691 osa:4337608 | Specific Specific Up Up Up Up Down Up | Plant hormone signal transduction Plant hormone signal transduction Plant hormone signal transduction Phagosome Phagosome Phagosome Coxidative phosphorylation |
| 124 125 126 127 128 129 130 131 | LOC_Os03g50860.1 LOC_Os01g56200.1 LOC_Os11g05480.1 LOC_Os01g59150.2 LOC_Os03g01530.1 LOC_Os01g18050.1 LOC_Os09g14510.1 (PEX3) LOC_Os05g02310.1 | histidine kinase, putative, expressed BTBA2 - Bric-a-Brac,Tramtrack, Broad Complex BTB domain with Ankyrin repeat region, expressed transcription factor, putative, expressed tubulin/FtsZ domain containing protein, putative, expressed soluble inorganic pyrophosphatase, putative, expressed 3-oxo-5-alpha-steroid 4-dehydrogenase, putative, expressed tetratricopeptide repeat containing protein, | osa:4333916 osa:4325503 osa:4349800 osa:4327550 osa:4331315 osa:4326917 osa:4326917 osa:433691 osa:4337608 osa:4336740 dosa:0s12t05719 | Specific Specific Up Up Up Up Down Up Down | Plant hormone signal transduction Plant hormone signal transduction Plant hormone signal transduction Phagosome Phagosome Phagosome Oxidative phosphorylation N-Glycan biosynthesis |
| 124 125 126 127 128 129 130 131 132 | LOC_Os03g50860.1 LOC_Os01g56200.1 LOC_Os11g05480.1 LOC_Os01g59150.2 LOC_Os03g01530.1 LOC_Os01g18050.1 LOC_Os09g14510.1 (PEX3) LOC_Os05g02310.1 LOC_Os04g48750.1 LOC_Os12g38380.1 LOC_Os04g18010.2 | histidine kinase, putative, expressed BTBA2 - Bric-a-Brac,Tramtrack, Broad Complex BTB domain with Ankyrin repeat region, expressed transcription factor, putative, expressed tubulin/FtsZ domain containing protein, putative, expressed soluble inorganic pyrophosphatase, putative, expressed 3-oxo-5-alpha-steroid 4-dehydrogenase, putative, expressed tetratricopeptide repeat containing protein, putative, expressed cleavage and polyadenylation specificity factor | osa:4333916 osa:4325503 osa:4349800 osa:4327550 osa:4327550 osa:4331315 osa:4326917 osa:4346691 osa:4337608 osa:4337608 osa:4336740 dosa:Os12t05719 00-01 | Specific Specific Up Up Up Up Down Up Down Specific | Plant hormone signal transduction Plant hormone signal transduction Plant hormone signal transduction Phagosome Phagosome Phagosome Phagosome Oxidative phosphorylation N-Glycan biosynthesis mRNA surveillance pathway |
| 124 125 126 127 128 129 130 131 132 133 134 | LOC_Os03g50860.1 LOC_Os01g56200.1 LOC_Os11g05480.1 LOC_Os01g59150.2 LOC_Os03g01530.1 LOC_Os01g18050.1 LOC_Os09g14510.1 (PEX3) LOC_Os05g02310.1 LOC_Os04g48750.1 LOC_Os12g38380.1 LOC_Os04g18010.2 | histidine kinase, putative, expressed BTBA2 - Bric-a-Brac,Tramtrack, Broad Complex BTB domain with Ankyrin repeat region, expressed transcription factor, putative, expressed tubulin/FtsZ domain containing protein, putative, expressed soluble inorganic pyrophosphatase, putative, expressed 3-oxo-5-alpha-steroid 4-dehydrogenase, putative, expressed tetratricopeptide repeat containing protein, putative, expressed cleavage and polyadenylation specificity factor subunit 1, putative, expressed transposon protein, putative, CACTA, En/Spm | osa:4333916 osa:4325503 osa:4329800 osa:4327550 osa:4327550 osa:4331315 osa:4336917 osa:4346691 osa:4336691 osa:4336740 dosa:0s12t05719 00-01 osa:9266269 | Specific Specific Up Up Up Up Down Down Specific Up | Plant hormone signal transduction Plant hormone signal transduction Plant hormone signal transduction Phagosome Phagosome Phagosome Phagosome Oxidative phosphorylation N-Glycan biosynthesis mRNA surveillance pathway mRNA surveillance pathway |

| 137 | LOC_Os07g03730.1 | SCP-like extracellular protein, expressed | osa:4342318 | Down | MAPK signaling pathway - plant;Plant hormone signal transduction;Plant- pathogen interaction |
|-----|--------------------------|---|--------------------------|-------------------|--|
| 138 | LOC_Os03g49260.1 | lipoxygenase, putative, expressed | osa:4333818 | Down | Linoleic acid metabolism |
| 139 | LOC_Os03g40670.1 | glycerophosphoryl diester phosphodiesterase family protein, putative, expressed | osa:4333407 | Up | Glycerophospholipid metabolism |
| 140 | LOC_Os02g31030.2 | glycerophosphoryl diester phosphodiesterase family protein, putative, expressed | osa:4329468 | Up | Glycerophospholipid metabolism |
| 141 | LOC_Os05g15530.1 (AT) | aminotransferase domain containing protein, putative, expressed | osa:4338203 | Down | Folate biosynthesis |
| 142 | LOC_Os03g25150.1 | transposon protein, putative, unclassified, expressed | bdi:100842616 | Up | Flavone and flavonol biosynthesis |
| 143 | LOC_Os09g32760.1 | acyl-ACP thioesterase, putative, expressed | osa:4347505 | Up | Fatty acid biosynthesis |
| 144 | LOC_Os04g51120.1 | ENTH domain containing protein, expressed | osa:4336871 | Down | Endocytosis |
| 145 | LOC_Os01g46580.1 | actin-related protein 2/3 complex subunit 2, putative, expressed | osa:4324174 | Down | Endocytosis |
| 146 | LOC_Os02g58640.1 | tumor susceptibility gene 101, putative, expressed | osa:4331267 | Down | Endocytosis |
| 147 | LOC_Os02g58220.1 | RPA2A - Putative single-stranded DNA binding complex subunit 2, expressed | osa:4331236 | Specific | DNA replication;Nucleotide excision repair;Mismatch repair;Homologous recombination |
| 148 | LOC_Os12g07720.1 | RFC4 - Putative clamp loader of PCNA, replication factor C subunit 4, expressed | osa:4351654 | Specific | DNA replication;Nucleotide excision repair;Mismatch repair |
| 149 | LOC_Os03g51030.1 | phytochrome A, putative, expressed | osa:4333930 | Down | Circadian rhythm - plant |
| 150 | LOC_Os01g58680.1 | apurinic endonuclease-redox protein, putative, expressed | osa:4327960 | Down | Base excision repair |
| 151 | LOC_Os04g42990.1 | suppressor of stem-loop protein 1, putative, expressed | dosa:Os04t05089 00-00 | Specific | Basal transcription factors;Nucleotide excision repair |
| 152 | LOC_Os03g10070.1 | transcription initiation factor IIB, putative, expressed | osa:4331943 | Down | Basal transcription factors |
| 153 | LOC_Os08g09240.2 | autophagy-related protein, putative, expressed | osa:4344857 | Down | Autophagy - other |
| 154 | LOC_Os01g54020.1 | tRNA synthetase, putative, expressed | osa:4326551 | Up | Aminoacyl-tRNA biosynthesis |
| 155 | LOC_Os01g72740.1 | cytochrome P450, putative, expressed | obr:102718882 | Up | - |
| 156 | LOC_Os02g11030.1 | 50S ribosomal protein L19, chloroplast precursor, putative, expressed | obr:102713795 | Specific | - |
| 157 | LOC_Os03g57450.1 | CAMK_CAMK_like.2 - CAMK includes calcium/calmodulin depedent protein kinases, expressed | dosa:Os03t07885 00-01 | Up | - |
| 158 | LOC_Os06g08080.1 | inorganic H+ pyrophosphatase, putative, expressed | osa:4340298 | Up | - |
| 159 | LOC_Os05g11950.1 | GDSL-like lipase/acylhydrolase, putative, expressed | dosa:Os05t02101 00-01 | Specific and Down | - |
| 160 | LOC_Os05g43100.1 | GDSL-like lipase/acylhydrolase, putative, expressed | obr:102720987 | Up and Down | - |
| 161 | LOC_Os03g25030.1 | GDSL-like lipase/acylhydrolase, putative, expressed | dosa:Os03t03658 00-01 | Up and Down | - |
| 162 | LOC_Os05g43120.1 | GDSL-like lipase/acylhydrolase, putative, expressed | obr:102720987 | Up | - |
| 163 | LOC_Os01g12320.1 | GDSL-like lipase/acylhydrolase, putative, expressed | sita:101772224 | Up | - |
| 164 | LOC_Os12g16200.1 | glutathione synthetase, chloroplast precursor, putative, expressed | obr:102718696 | Up | - |
| 165 | LOC_Os01g08090.1 | flavonol-3-O-glycoside-7-O-glucosyltransferase 1, putative, expressed | dosa:Os01t01760 00-01 | Up | - |

| 166 | LOC_Os02g09240.1 | cytochrome P450 71D8, putative, expressed | dosa:Os02t01852 00-01 | Down | - |
|---|--|--|---|--|-------------|
| 167 | LOC_Os03g19350.1 | OsLonP1 - Putative Lon protease homologue, expressed | osa:4332601 | Specific and Down | - |
| 168 | LOC_Os02g52610.1 | xyloglucan fucosyltransferase, putative, expressed | dosa:Os02t07639 00-01 | Specific and Down | - |
| 169 | LOC_Os03g01730.1 | expressed protein | dosa:Os04t01193 00-00 | Specific | - |
| 170 | LOC_Os03g32526.1 | tRNA-splicing endonuclease positive effector- related, putative, expressed | osa:4333212 | Specific | - |
| 171 | LOC_Os05g23940.1 | transcription initiation factor IIB, putative, expressed | osa:4338362 | Specific | - |
| 172 | LOC_Os01g22390.2 | WD domain containing protein, putative, expressed | osa:4326972 | Specific | - |
| 173 | LOC_Os04g33450.1 | expressed protein | osa:4335760 | Specific | - |
| 174 | LOC_Os06g36490.1 | ethylene-responsive element-binding protein, putative, expressed | osa:4341303 | Specific | - |
| 175 | LOC_Os05g36070.1 | signal peptide peptidase domain containing protein, expressed | osa:4338901 | Specific | - |
| 176 | LOC_Os01g48900.1 | dynamin-related protein 1A, putative, expressed | osa:9269791 | Specific | - |
| 177 | LOC_Os07g35750.1 | TKL_IRAK_DUF26-ld.3 - DUF26 kinases have homology to DUF26 containing loci, expressed | osa:4343505 | Specific | - |
| 178 | LOC_Os07g46920.1 | sex determination protein tasselseed-2, putative, expressed | osa:4344204 | Specific | - |
| 179 | LOC_Os02g30620.2 | dnaJ domain containing protein, expressed | osa:4329448 | Specific | - |
| 180 | LOC_Os01g20160.1 | OsHKT1;5 - Na+ transporter, expressed | osa:4327757 | Specific | - |
| 100 | 200_000192010011 | | | | |
| 181 | LOC_Os03g27820.1 | expressed protein | osa:4333036 | Specific | - |
| | - | expressed protein glycine-rich cell wall structural protein 2 precursor, putative, expressed | osa:4333036 dosa:Os09t04255 00-01 | | - |
| 181 | LOC_Os03g27820.1 | glycine-rich cell wall structural protein 2 | dosa:Os09t04255 | Specific | - |
| 181 182 | LOC_Os03g27820.1 LOC_Os09g25720.1 | glycine-rich cell wall structural protein 2 precursor, putative, expressed | dosa:Os09t04255 00-01 dosa:Os04t05344 | Specific Specific | - - - |
| 181 182 183 | LOC_Os03g27820.1 LOC_Os09g25720.1 LOC_Os04g45190.3 | glycine-rich cell wall structural protein 2 precursor, putative, expressed MSP domain containing protein, expressed | dosa:Os09t04255 00-01 dosa:Os04t05344 00-01 | Specific Specific Specific | |
| 181 182 183 184 | LOC_Os03g27820.1 LOC_Os09g25720.1 LOC_Os04g45190.3 LOC_Os10g41560.1 | glycine-rich cell wall structural protein 2 precursor, putative, expressed MSP domain containing protein, expressed expressed protein sex determination protein tasselseed-2, putative, | dosa:Os09t04255 00-01 dosa:Os04t05344 00-01 osa:4349418 | Specific Specific Specific Specific | |
| 181 182 183 184 185 | LOC_Os03g27820.1 LOC_Os09g25720.1 LOC_Os04g45190.3 LOC_Os10g41560.1 LOC_Os04g33240.1 | glycine-rich cell wall structural protein 2 precursor, putative, expressed MSP domain containing protein, expressed expressed protein sex determination protein tasselseed-2, putative, expressed | dosa:Os09t04255 00-01 dosa:Os04t05344 00-01 osa:4349418 osa:4335749 | Specific Specific Specific Specific Specific | - |
| 181 182 183 184 185 186 | LOC_Os03g27820.1 LOC_Os09g25720.1 LOC_Os04g45190.3 LOC_Os10g41560.1 LOC_Os04g33240.1 LOC_Os04g21710.1 | glycine-rich cell wall structural protein 2 precursor, putative, expressed MSP domain containing protein, expressed expressed protein sex determination protein tasselseed-2, putative, expressed expressed protein DHHC zinc finger domain containing protein, | dosa:Os09t04255 00-01 dosa:Os04t05344 00-01 osa:4349418 osa:4335749 osa:4335381 | Specific Specific Specific Specific Specific Specific | - |
| 181 182 183 184 185 186 187 | LOC_Os03g27820.1 LOC_Os09g25720.1 LOC_Os04g45190.3 LOC_Os10g41560.1 LOC_Os04g33240.1 LOC_Os04g21710.1 LOC_Os03g58960.1 | glycine-rich cell wall structural protein 2 precursor, putative, expressed MSP domain containing protein, expressed expressed protein sex determination protein tasselseed-2, putative, expressed expressed protein DHHC zinc finger domain containing protein, expressed retrotransposon protein, putative, SINE subclass, | dosa:Os09t04255 00-01 dosa:Os04t05344 00-01 osa:4349418 osa:4335749 osa:4335781 osa:4334485 | Specific Specific Specific Specific Specific Specific Specific | - |
| 181 182 183 184 185 186 187 188 | LOC_Os03g27820.1 LOC_Os09g25720.1 LOC_Os04g45190.3 LOC_Os10g41560.1 LOC_Os04g33240.1 LOC_Os04g21710.1 LOC_Os03g58960.1 LOC_Os08g16830.1 | glycine-rich cell wall structural protein 2 precursor, putative, expressed MSP domain containing protein, expressed expressed protein sex determination protein tasselseed-2, putative, expressed expressed protein DHHC zinc finger domain containing protein, expressed retrotransposon protein, putative, SINE subclass, expressed RNA-binding zinc finger protein, putative, | dosa:Os09t04255 00-01 dosa:Os04t05344 00-01 osa:4349418 osa:4335749 osa:4335381 osa:4334485 osa:4334485 | Specific Specific Specific Specific Specific Specific Specific Specific | - |
| 181 182 183 184 185 186 187 188 189 | LOC_Os03g27820.1 LOC_Os09g25720.1 LOC_Os04g45190.3 LOC_Os10g41560.1 LOC_Os04g33240.1 LOC_Os04g21710.1 LOC_Os03g58960.1 LOC_Os08g16830.1 LOC_Os07g48410.1 | glycine-rich cell wall structural protein 2 precursor, putative, expressed MSP domain containing protein, expressed expressed protein sex determination protein tasselseed-2, putative, expressed expressed protein DHHC zinc finger domain containing protein, expressed retrotransposon protein, putative, SINE subclass, expressed RNA-binding zinc finger protein, putative, expressed retrotransposon protein, putative, unclassified, | dosa:Os09t04255 00-01 dosa:Os04t05344 00-01 osa:4349418 osa:4335749 osa:4335381 osa:4334485 osa:4334485 osa:4344312 | Specific Specific Specific Specific Specific Specific Specific Specific | - |
| 181 182 183 184 185 186 187 188 189 190 | LOC_Os03g27820.1 LOC_Os09g25720.1 LOC_Os04g45190.3 LOC_Os10g41560.1 LOC_Os04g33240.1 LOC_Os04g21710.1 LOC_Os03g58960.1 LOC_Os08g16830.1 LOC_Os07g48410.1 LOC_Os09g04240.1 | glycine-rich cell wall structural protein 2 precursor, putative, expressed MSP domain containing protein, expressed expressed protein sex determination protein tasselseed-2, putative, expressed expressed protein DHHC zinc finger domain containing protein, expressed retrotransposon protein, putative, SINE subclass, expressed RNA-binding zinc finger protein, putative, expressed retrotransposon protein, putative, unclassified, expressed actin, putative, expressed | dosa:Os09t04255 00-01 dosa:Os04t05344 00-01 osa:4349418 osa:4335749 osa:4335381 osa:4334485 osa:4334485 osa:4344312 pda:103699490 | Specific Specific Specific Specific Specific Specific Specific Specific Specific | - |
| 181 182 183 184 185 186 187 188 189 190 191 | LOC_Os03g27820.1 LOC_Os09g25720.1 LOC_Os04g45190.3 LOC_Os10g41560.1 LOC_Os04g33240.1 LOC_Os04g21710.1 LOC_Os03g58960.1 LOC_Os08g16830.1 LOC_Os07g48410.1 LOC_Os09g04240.1 LOC_Os08g03440.1 | glycine-rich cell wall structural protein 2 precursor, putative, expressed MSP domain containing protein, expressed expressed protein sex determination protein tasselseed-2, putative, expressed expressed protein DHHC zinc finger domain containing protein, expressed retrotransposon protein, putative, SINE subclass, expressed RNA-binding zinc finger protein, putative, expressed retrotransposon protein, putative, unclassified, expressed actin, putative, expressed wD40-like, putative, expressed helix-loop-helix DNA-binding domain containing protein, expressed | dosa:Os09t04255 00-01 dosa:Os04t05344 00-01 osa:4349418 osa:4335749 osa:4335749 osa:4335749 osa:4334485 osa:4334485 osa:43445134 osa:4344517 dosa:Os02t07860 00-01 osa:4329910 | Specific Specific Specific Specific Specific Specific Specific Specific Specific Specific Specific | - |
| 181 182 183 184 185 186 187 188 189 190 191 192 | LOC_Os03g27820.1 LOC_Os03g27820.1 LOC_Os09g25720.1 LOC_Os04g45190.3 LOC_Os10g41560.1 LOC_Os04g33240.1 LOC_Os04g21710.1 LOC_Os03g58960.1 LOC_Os03g58960.1 LOC_Os08g16830.1 LOC_Os07g48410.1 LOC_Os09g04240.1 LOC_Os08g03440.1 | glycine-rich cell wall structural protein 2 precursor, putative, expressed MSP domain containing protein, expressed expressed protein sex determination protein tasselseed-2, putative, expressed expressed protein DHHC zinc finger domain containing protein, expressed retrotransposon protein, putative, SINE subclass, expressed RNA-binding zinc finger protein, putative, expressed retrotransposon protein, putative, unclassified, expressed actin, putative, expressed wD40-like, putative, expressed helix-loop-helix DNA-binding domain containing protein, expressed SAM-dependent methyltransferase, putative, expressed | dosa:Os09t04255 00-01 dosa:Os04t05344 00-01 osa:4349418 osa:4335749 osa:4335381 osa:4334485 osa:4334485 osa:43445134 osa:4344312 pda:103699490 osa:4344577 dosa:Os02t07860 00-01 | Specific Specific Specific Specific Specific Specific Specific Specific Specific Specific Specific Specific | - |
| 181 182 183 184 185 186 187 188 189 190 191 192 193 | LOC_Os03g27820.1 LOC_Os09g25720.1 LOC_Os04g45190.3 LOC_Os10g41560.1 LOC_Os04g33240.1 LOC_Os04g21710.1 LOC_Os03g58960.1 LOC_Os08g16830.1 LOC_Os07g48410.1 LOC_Os09g04240.1 LOC_Os08g03440.1 LOC_Os02g54500.1 LOC_Os02g39140.1 | glycine-rich cell wall structural protein 2 precursor, putative, expressed MSP domain containing protein, expressed expressed protein sex determination protein tasselseed-2, putative, expressed expressed protein DHHC zinc finger domain containing protein, expressed retrotransposon protein, putative, SINE subclass, expressed RNA-binding zinc finger protein, putative, expressed retrotransposon protein, putative, unclassified, expressed actin, putative, expressed wD40-like, putative, expressed helix-loop-helix DNA-binding domain containing protein, expressed SAM-dependent methyltransferase, putative, | dosa:Os09t04255 00-01 dosa:Os04t05344 00-01 osa:4349418 osa:4335749 osa:4335749 osa:4335749 osa:4334485 osa:4334485 osa:4344512 pda:103699490 osa:4344577 dosa:Os02t07860 00-01 osa:4329910 dosa:Os12t02031 | Specific Specific Specific Specific Specific Specific Specific Specific Specific Specific Specific Specific | |

| 197 | LOC_Os03g43990.1 | BTBN8 - Bric-a-Brac, Tramtrack, Broad Complex BTB domain with non-phototropic hypocotyl 3 NPH3 and coiled-coil domains, expressed | osa:107280491 | Specific | - |
|-----|------------------|--|--------------------------|----------|---|
| 198 | LOC_Os01g71340.1 | glycosyl hydrolases family 17, putative, expressed | osa:4326518 | Specific | - |
| 199 | LOC_Os10g42870.1 | peptide transporter PTR2, putative, expressed | osa:4349516 | Specific | - |
| 200 | LOC_Os08g01920.1 | SGR2, putative, expressed | osa:4344482 | Specific | - |
| 201 | LOC_Os03g04130.1 | AMP-binding domain containing protein, expressed | osa:4331525 | Specific | - |
| 202 | LOC_Os04g50120.1 | zinc-binding protein, putative, expressed | osa:4336825 | Specific | - |
| 203 | LOC_Os09g02130.1 | expressed protein | osa:4346382 | Specific | - |
| 204 | LOC_Os01g57690.1 | early nodulin 20 precursor, putative, expressed | osa:4327048 | Specific | - |
| 205 | LOC_Os02g25700.1 | O-acyltransferase, putative, expressed | osa:4329278 | Specific | - |
| 206 | LOC_Os10g39640.1 | expansin precursor, putative, expressed | osa:4349265 | Specific | - |
| 207 | LOC_Os02g04450.1 | plant-specific domain TIGR01589 family protein, putative, expressed | osa:4328235 | Specific | - |
| 208 | LOC_Os02g13560.1 | transporter family protein, putative, expressed | osa:4328798 | Specific | - |
| 209 | LOC_Os08g03690.1 | LTPL24 - Protease inhibitor/seed storage/LTP family protein precursor, expressed | osa:4344595 | Specific | - |
| 210 | LOC_Os11g43600.1 | peptide chain release factor protein, putative, expressed | osa:4351050 | Specific | - |
| 211 | LOC_Os12g35630.1 | elongation factor TS family protein, expressed | osa:4352441 | Specific | - |
| 212 | LOC_Os07g13360.1 | expressed protein | - | Specific | - |
| 213 | LOC_Os12g29560.1 | DHHC zinc finger domain containing protein, expressed | osa:4352214 | Specific | - |
| 214 | LOC_Os12g06210.1 | harpin-induced protein 1 domain containing protein, expressed | osa:4351556 | Specific | - |
| 215 | LOC_Os07g27810.1 | fiber protein Fb34, putative, expressed | osa:4343166 | Specific | - |
| 216 | LOC_Os08g43010.1 | disease resistance RPP13-like protein 1, putative, expressed | osa:4346203 | Specific | - |
| 217 | LOC_Os01g51640.1 | expressed protein | osa:4325943 | Specific | - |
| 218 | LOC_Os11g04460.1 | calcium-transporting ATPase, plasma membrane- type, putative, expressed | osa:4349735 | Specific | - |
| 219 | LOC_Os06g08280.1 | protein kinase domain containing protein, expressed | osa:4340309 | Specific | - |
| 220 | LOC_Os03g22140.1 | tetratricopeptide repeat domain containing protein, expressed | osa:4332790 | Specific | - |
| 221 | LOC_Os01g49120.1 | MATE efflux family protein, putative, expressed | dosa:Os01t06849 00-01 | Specific | - |
| 222 | LOC_Os01g42234.2 | amino acid permease family protein, putative, expressed | osa:4324220 | Specific | - |
| 223 | LOC_Os05g05930.1 | peripheral-type benzodiazepine receptor, putative, expressed | osa:9271175 | Specific | - |
| 224 | LOC_Os08g41500.1 | ubiquitin-associated protein, putative, expressed | osa:4346099 | Specific | - |
| 225 | LOC_Os03g11010.1 | natural resistance-associated macrophage protein, putative, expressed | osa:4332012 | Specific | - |
| 226 | LOC_Os11g37940.1 | WIP2 - Wound-induced protein precursor, expressed | osa:4350820 | Specific | - |
| 227 | LOC_Os01g58620.1 | expressed protein | osa:4327955 | Specific | - |
| 228 | LOC_Os10g25870.1 | dirigent, putative, expressed | osa:4348558 | Specific | - |
| | | | | | |

| 229 | LOC_Os02g09780.1 | phytoene dehydrogenase-like, putative, expressed | osa:4328575 | Specific | - |
|-----|------------------|---|--------------------------|-------------|---|
| 230 | LOC_Os02g58110.1 | expressed protein | dosa:Os02t08275 00-01 | Specific | - |
| 231 | LOC_Os11g45990.1 | von Willebrand factor type A domain containing protein, putative, expressed | osa:4351146 | Specific | - |
| 232 | LOC_Os02g58030.1 | leucine-rich repeat-containing protein 40, putative, expressed | osa:4331218 | Specific | - |
| 233 | LOC_Os03g04380.1 | LYR motif containing protein, putative, expressed | osa:4331544 | Specific | - |
| 234 | LOC_Os05g01360.1 | expressed protein | osa:4337547 | Specific | - |
| 235 | LOC_Os08g01710.1 | GLTP domain containing protein, putative, expressed | dosa:Os08t01087 00-00 | Specific | - |
| 236 | LOC_Os03g44670.1 | expressed protein | osa:4333583 | Specific | - |
| 237 | LOC_Os05g51630.2 | early-responsive to dehydration protein-related, putative, expressed | osa:4339808 | Specific | - |
| 238 | LOC_Os10g35490.1 | hydrolase, alpha/beta fold family domain containing protein, expressed | dosa:Os10t04980 00-01 | Specific | - |
| 239 | LOC_Os01g33420.1 | glycosyl hydrolase family protein 27, putative, expressed | osa:4323975 | Specific | - |
| 240 | LOC_Os02g54980.1 | pheophorbide a oxygenase, chloroplast precursor, putative, expressed | osa:4330982 | Specific | - |
| 241 | LOC_Os02g58080.1 | transporter, major facilitator family, putative, expressed | osa:4331221 | Specific | - |
| 242 | LOC_Os08g28790.1 | dirigent, putative, expressed | osa:4345418 | Specific | - |
| 243 | LOC_Os06g23350.1 | late embryogenesis abundant protein D-34, putative, expressed | osa:4340952 | Specific | - |
| 244 | LOC_Os11g04020.1 | major facilitator superfamily antiporter, putative, expressed | osa:4349704 | Specific | - |
| 245 | LOC_Os03g61810.1 | tRNA-specific adenosine deaminase, putative, expressed | osa:4334690 | Specific | - |
| 246 | LOC_Os03g16850.1 | dof zinc finger domain containing protein, putative, expressed | osa:107280245 | Specific | - |
| 247 | LOC_Os12g36240.1 | inhibitor I family protein, putative, expressed | dosa:Os12t05487 00-01 | Specific | - |
| 248 | LOC_Os01g37770.1 | RWD domain containing protein, expressed | osa:4324673 | Specific | - |
| 249 | LOC_Os03g57854.1 | MBTB3 - Bric-a-Brac, Tramtrack, Broad Complex BTB domain with Meprin and TRAF Homology MATH domain, expressed | osa:4334388 | Specific | - |
| 250 | LOC_Os11g11100.1 | bZIP transcription factor domain containing protein, expressed | osa:4350088 | Specific | - |
| 251 | LOC_Os01g49510.1 | OsPOP3 - Putative Prolyl Oligopeptidase homologue, expressed | osa:4327946 | Specific | - |
| 252 | LOC_Os05g39500.1 | DUF640 domain containing protein, putative, expressed | osa:107278201 | Up and Down | - |
| 253 | LOC_Os06g39040.1 | dehydrogenase/reductase SDR family member 12, putative, expressed | osa:9267040 | Up and Down | - |
| 254 | LOC_Os07g07860.1 | LTPL76 - Protease inhibitor/seed storage/LTP family protein precursor, expressed | osa:4342528 | Up and Down | - |
| 255 | LOC_Os07g17330.1 | B12D protein, putative, expressed | osa:4342911 | Up and Down | - |
| 256 | LOC_Os09g39090.1 | vignain precursor, putative, expressed | osa:107276064 | Up and Down | - |
| 257 | LOC_Os10g39360.1 | aspartic proteinase nepenthesin precursor, putative, expressed | osa:107275604 | Up and Down | - |
| 258 | LOC_Os10g39390.1 | Eukaryotic aspartyl protease domain containing protein, expressed | osa:107279218 | Up and Down | - |

| 259 | LOC_Os10g18760.1 | dirigent, putative, expressed | osa:9270308 | Up and Down | 1 - |
|-----|------------------|---|--------------------------|-------------|-----|
| 260 | LOC_Os05g45460.1 | POEI52 - Pollen Ole e I allergen and extensin family protein precursor, expressed | osa:4339414 | Up and Down | 1 - |
| 261 | LOC_Os04g28250.1 | cysteine proteinase inhibitor precursor, putative, expressed | osa:4335551 | Up and Down | 1 - |
| 262 | LOC_Os08g13440.1 | cupin domain containing protein, expressed | osa:4344999 | Up and Down | 1 - |
| 263 | LOC_Os03g26820.1 | LTPL52 - Protease inhibitor/seed storage/LTP family protein precursor, expressed | osa:4332993 | Up and Down | 1 - |
| 264 | LOC_Os06g49100.1 | retrotransposon protein, putative, unclassified, expressed | osa:4341996 | Up and Down | 1 - |
| 265 | LOC_Os09g26620.1 | auxin-repressed protein, putative, expressed | osa:4347155 | Up and Down | 1 - |
| 266 | LOC_Os05g02820.1 | protein transport protein-related, putative, expressed | osa:107281145 | Up and Down | 1 - |
| 267 | LOC_Os01g14590.1 | pathogen-related protein, putative, expressed | osa:4327214 | Up and Down | 1 - |
| 268 | LOC_Os03g19290.1 | mitochondrial import inner membrane translocase subunit Tim17, putative, expressed | osa:4332597 | Up and Down | 1 - |
| 269 | LOC_Os03g19427.1 | nicotianamine synthase, putative, expressed | osa:4332608 | Up and Down | 1 - |
| 270 | LOC_Os05g18604.1 | OsSCP28 - Putative Serine Carboxypeptidase homologue, expressed | osa:4338250 | Up and Down | 1 - |
| 271 | LOC_Os02g03120.1 | endoglucanase, putative, expressed | dosa:Os02t01237 00-01 | Up and Down | 1 - |
| 272 | LOC_Os09g34070.2 | RNA recognition motif containing protein, expressed | osa:4347579 | Up | - |
| 273 | LOC_Os02g15220.1 | bromodomain containing protein, expressed | dosa:Os02t02503 00-01 | Up | - |
| 274 | LOC_Os01g53250.1 | NADPH reductase, putative, expressed | osa:4324160 | Up | - |
| 275 | LOC_Os11g34120.1 | exportin 1, putative, expressed | osa:4350677 | Up | - |
| 276 | LOC_Os08g16600.1 | WD-40 repeat protein family, putative, expressed | osa:4345122 | Up | - |
| 277 | LOC_Os04g09680.1 | caffeic acid 3-O-methyltransferase, putative, expressed | dosa:Os04t01759 00-01 | Up | - |
| 278 | LOC_Os01g60650.1 | non-green plastid inner envelope membrane protein, putative, expressed | osa:4327612 | Up | - |
| 279 | LOC_Os03g44520.1 | expressed protein | osa:4333573 | Up | - |
| 280 | LOC_Os03g53360.1 | transferase family protein, putative, expressed | osa:4334082 | Up | - |
| 281 | LOC_Os09g16090.1 | UDP-glucoronosyl/UDP-glucosyl transferase, putative, expressed | osa:4346756 | Up | - |
| 282 | LOC_Os01g37825.1 | M16 domain containing zinc peptidase, putative, expressed | osa:4324677 | Up | - |
| 283 | LOC_Os11g26750.1 | dehydrin, putative, expressed | osa:4350451 | Up | - |
| 284 | LOC_Os05g51450.1 | OsClp8 - Putative Clp protease homologue, expressed | osa:4339792 | Up | - |
| 285 | LOC_Os10g29620.1 | tyrosine protein kinase domain containing protein, putative, expressed | osa:4348697 | Up | - |
| 286 | LOC_Os05g01500.1 | tubulin-specific chaperone E, putative, expressed | osa:4337557 | Up | - |
| 287 | LOC_Os09g38740.1 | expressed protein | osa:4347849 | Up | - |
| 288 | LOC_Os07g38300.1 | ribosome recycling factor, putative, expressed | osa:4343662 | Up | - |

| 289 | LOC_Os12g21700.1 | zinc finger C-x8-C-x5-C-x3-H type family protein, expressed | osa:4352041 | Up | - |
|-----|------------------|---|---|----|---|
| 290 | LOC_Os12g26380.1 | dirigent, putative, expressed | osa:107279766 | Up | - |
| 291 | LOC_Os04g02150.1 | tRNA methyltransferase, putative, expressed | osa:4334938 | Up | - |
| 292 | LOC_Os10g18820.1 | dirigent, putative, expressed | osa:4348341 | Up | - |
| 293 | LOC_Os04g56430.1 | cysteine-rich receptor-like protein kinase, putative, expressed | osa:4337274 | Up | - |
| 294 | LOC_Os06g12990.1 | tRNA methyltransferase, putative, expressed | osa:4340601 | Up | - |
| 295 | LOC_Os07g06970.1 | HEN1, putative, expressed | dosa:Os07t01640 00-01 | Up | - |
| 296 | LOC_Os02g18660.1 | expressed protein | osa:4329046 | Up | - |
| 297 | LOC_Os10g18870.1 | dirigent, putative, expressed | osa:4348342 | Up | - |
| 298 | LOC_Os07g07920.1 | LTPL100 - Protease inhibitor/seed storage/LTP family protein precursor, expressed | osa:4342533 | Up | - |
| 299 | LOC_Os07g07790.1 | LTPL75 - Protease inhibitor/seed storage/LTP family protein precursor, expressed | osa:9270363 | Up | - |
| 300 | LOC_Os11g26790.1 | dehydrin, putative, expressed | osa:4350454 | Up | - |
| 301 | LOC_Os08g26110.1 | dirigent, putative, expressed | obr:102707330 | Up | - |
| 302 | LOC_Os04g24340.1 | phytase, putative, expressed | osa:4335443 | Up | - |
| 303 | LOC_Os01g07890.1 | expressed protein dosa:Os01t01741 00-01 | | Up | - |
| 304 | LOC_Os04g24328.1 | jasmonate-induced protein, putative, expressed | osa:9267350 | Up | - |
| 305 | LOC_Os03g46710.1 | expressed protein | osa:4333683 | Up | - |
| 306 | LOC_Os04g24319.1 | jasmonate-induced protein, putative, expressed | osa:107276694 | Up | - |
| 307 | LOC_Os06g22100.2 | DNA binding protein, putative, expressed | osa:9271930 | Up | - |
| 308 | LOC_Os05g37270.1 | retrotransposon protein, putative, unclassified, expressed | protein, putative, unclassified, sind:105171171 U | | - |
| 309 | LOC_Os01g62980.2 | LTPL101 - Protease inhibitor/seed storage/LTP family protein precursor, expressed | dosa:Os01t08490 00-02 | Up | - |
| 310 | LOC_Os01g25030.1 | dirigent, putative | osa:107278107 | Up | - |
| 311 | LOC_Os06g08730.1 | expressed protein | osa:4340345 | Up | - |
| 312 | LOC_Os01g56820.1 | AGAP000951-PA, putative, expressed | dosa:Os01t07756 00-01 | Up | - |
| 313 | LOC_Os04g40620.1 | peptide methionine sulfoxide reductase, putative, expressed | osa:107277650 | Up | - |
| 314 | LOC_Os06g22070.1 | mitochondrial glycoprotein, putative, expressed | osa:4340910 | Up | - |
| 315 | LOC_Os10g28030.1 | OsPOP22 - Putative Prolyl Oligopeptidase homologue, expressed | osa:4348628 | Up | - |
| 316 | LOC_Os08g14570.1 | NADPH reductase, putative, expressed | osa:4345047 | Up | - |
| 317 | LOC_Os02g44870.1 | dehydrin, putative, expressed | osa:4330265 | Up | - |
| 318 | LOC_Os04g25560.1 | OsSCP23 - Putative Serine Carboxypeptidase homologue, expressed | osa:4335479 | Up | - |
| 319 | LOC_Os07g27950.1 | RING zinc finger protein, putative, expressed | osa:4343169 | Up | - |
| 320 | LOC_Os03g59080.1 | AMP-binding enzyme, putative, expressed | osa:4334496 | Up | - |
| 321 | LOC_Os07g26110.1 | membrane associated DUF588 domain containing protein, putative, expressed | osa:4343098 | Up | - |
| | | | | | |

| 322 | LOC_Os03g38990.1 | DNA-binding protein, putative, expressed | osa:4333346 | Up | - |
|---|--|--|---|--|-------------|
| 323 | LOC_Os01g55700.1 | NLI interacting factor-like phosphatase, putative, expressed | osa:4327028 | Up | - |
| 324 | LOC_Os04g41950.1 | calcium-binding mitochondrial protein anon- 60Da, putative, expressed | osa:4336282 | Up | - |
| 325 | LOC_Os03g05920.1 | expressed protein | osa:4331660 | Up | - |
| 326 | LOC_Os03g52040.2 | OsSCP19 - Putative Serine Carboxypeptidase homologue, expressed | osa:9271773 | Up | - |
| 327 | LOC_Os03g63930.1 | acyl carrier protein, putative, expressed | osa:4334838 | Up | - |
| 328 | LOC_Os03g12810.1 | maf, putative, expressed | osa:9270576 | Up | - |
| 329 | LOC_Os06g49770.1 | LTPL86 - Protease inhibitor/seed storage/LTP family protein precursor, expressed | osa:4342041 | Up | - |
| 330 | LOC_Os01g03680.1 | BBTI8 - Bowman-Birk type bran trypsin inhibitor precursor, expressed | osa:4325989 | Up | - |
| 331 | LOC_Os03g51150.1 | expressed protein | osa:4333936 | Up | - |
| 332 | LOC_Os02g51300.1 | AP2 domain containing protein, expressed | osa:4330724 | Up | - |
| 333 | LOC_Os03g01660.1 | SKP1, putative, expressed | osa:4331327 | Up | - |
| 334 | LOC_Os01g63210.1 | SOUL heme-binding protein, putative, expressed | osa:4324804 | Up | - |
| 335 | LOC_Os01g03360.1 | BBTI5 - Bowman-Birk type bran trypsin inhibitor precursor, expressed | osa:9271230 | Up | - |
| 336 | LOC_Os06g18140.1 | UDP-glucoronosyl and UDP-glucosyl transferase domain containing protein, expressed | osa:4340787 | Up | - |
| 337 | LOC_Os09g32840.1 | nucleotide pyrophosphatase/phosphodiesterase, putative, expressed | osa:4347510 | Up | - |
| | | | | | |
| 338 | LOC_Os07g47510.1 | stress-related protein, putative, expressed | dosa:Os07t06718 00-01 | Up | - |
| 338 339 | LOC_Os07g47510.1 LOC_Os08g14200.1 | stress-related protein, putative, expressed glycosyl hydrolases family 16, putative, expressed | | Up Up | - |
| | - | glycosyl hydrolases family 16, putative, | 00-01 | | - |
| 339 | LOC_Os08g14200.1 | glycosyl hydrolases family 16, putative, expressed BBTI7 - Bowman-Birk type bran trypsin | 00-01 osa:9271033 | Up | - - - |
| 339 340 341 | LOC_Os08g14200.1 LOC_Os01g03390.1 | glycosyl hydrolases family 16, putative, expressed BBTI7 - Bowman-Birk type bran trypsin inhibitor precursor, expressed | 00-01 osa:9271033 osa:9267088 | Up Up | - |
| 339 340 341 | LOC_Os08g14200.1 LOC_Os01g03390.1 LOC_Os01g48850.1 | glycosyl hydrolases family 16, putative, expressed BBTI7 - Bowman-Birk type bran trypsin inhibitor precursor, expressed auxin-responsive protein, putative, expressed bark storage protein A precursor, putative, | 00-01 osa:9271033 osa:9267088 osa:4324390 | Up Up Up | - |
| 339340341342 | LOC_Os08g14200.1 LOC_Os01g03390.1 LOC_Os01g48850.1 LOC_Os06g02210.1 | glycosyl hydrolases family 16, putative, expressed BBTI7 - Bowman-Birk type bran trypsin inhibitor precursor, expressed auxin-responsive protein, putative, expressed bark storage protein A precursor, putative, expressed 39S ribosomal protein L46, mitochondrial | 00-01 osa:9271033 osa:9267088 osa:4324390 osa:4339897 | Up Up Up Up | - |
| 339 340 341 342 343 | LOC_Os08g14200.1 LOC_Os01g03390.1 LOC_Os01g48850.1 LOC_Os06g02210.1 LOC_Os06g19640.1 | glycosyl hydrolases family 16, putative, expressed BBTI7 - Bowman-Birk type bran trypsin inhibitor precursor, expressed auxin-responsive protein, putative, expressed bark storage protein A precursor, putative, expressed 39S ribosomal protein L46, mitochondrial precursor, putative, expressed | 00-01 osa:9271033 osa:9267088 osa:4324390 osa:4339897 osa:4340823 | Up Up Up Up Up | - |
| 339 340 341 342 343 344 | LOC_Os08g14200.1 LOC_Os01g03390.1 LOC_Os01g48850.1 LOC_Os06g02210.1 LOC_Os06g19640.1 LOC_Os10g09850.1 | glycosyl hydrolases family 16, putative, expressed BBTI7 - Bowman-Birk type bran trypsin inhibitor precursor, expressed auxin-responsive protein, putative, expressed bark storage protein A precursor, putative, expressed 39S ribosomal protein L46, mitochondrial precursor, putative, expressed EF hand family protein, putative, expressed D-alanineD-alanine ligase family, putative, | 00-01 osa:9271033 osa:9267088 osa:4324390 osa:4339897 osa:4340823 osa:4348196 | Up Up Up Up Up Up | - |
| 339 340 341 342 343 344 345 | LOC_Os08g14200.1 LOC_Os01g03390.1 LOC_Os01g48850.1 LOC_Os06g02210.1 LOC_Os06g19640.1 LOC_Os10g09850.1 LOC_Os07g49110.1 | glycosyl hydrolases family 16, putative, expressed BBTI7 - Bowman-Birk type bran trypsin inhibitor precursor, expressed auxin-responsive protein, putative, expressed bark storage protein A precursor, putative, expressed 39S ribosomal protein L46, mitochondrial precursor, putative, expressed EF hand family protein, putative, expressed D-alanineD-alanine ligase family, putative, expressed two pore calcium channel protein 1, putative, | 00-01 osa:9271033 osa:9267088 osa:4324390 osa:4339897 osa:4340823 osa:43448196 osa:4344370 | Up Up Up Up Up Up | - |
| 339 340 341 342 343 344 345 346 | LOC_Os08g14200.1 LOC_Os01g03390.1 LOC_Os01g48850.1 LOC_Os06g02210.1 LOC_Os06g19640.1 LOC_Os10g09850.1 LOC_Os07g49110.1 LOC_Os01g48680.2 | glycosyl hydrolases family 16, putative, expressed BBTI7 - Bowman-Birk type bran trypsin inhibitor precursor, expressed auxin-responsive protein, putative, expressed bark storage protein A precursor, putative, expressed 39S ribosomal protein L46, mitochondrial precursor, putative, expressed EF hand family protein, putative, expressed D-alanineD-alanine ligase family, putative, expressed two pore calcium channel protein 1, putative, expressed | 00-01 osa:9271033 osa:9267088 osa:4324390 osa:4339897 osa:4340823 osa:43448196 osa:4344370 osa:4325272 | Up Up Up Up Up Up Up | - |
| 339 340 341 342 343 344 345 346 347 | LOC_Os08g14200.1 LOC_Os01g03390.1 LOC_Os01g48850.1 LOC_Os06g02210.1 LOC_Os06g19640.1 LOC_Os10g09850.1 LOC_Os07g49110.1 LOC_Os01g48680.2 LOC_Os05g08390.1 | glycosyl hydrolases family 16, putative, expressed BBTI7 - Bowman-Birk type bran trypsin inhibitor precursor, expressed auxin-responsive protein, putative, expressed bark storage protein A precursor, putative, expressed 39S ribosomal protein L46, mitochondrial precursor, putative, expressed EF hand family protein, putative, expressed D-alanineD-alanine ligase family, putative, expressed two pore calcium channel protein 1, putative, expressed expressed protein | 00-01 osa:9271033 osa:9267088 osa:4324390 osa:4339897 osa:4340823 osa:43448196 osa:4344370 osa:4325272 osa:9270309 | Up Up Up Up Up Up Up Up | - |
| 339 340 341 342 343 344 345 346 347 348 | LOC_Os08g14200.1 LOC_Os01g03390.1 LOC_Os01g48850.1 LOC_Os06g02210.1 LOC_Os06g19640.1 LOC_Os10g09850.1 LOC_Os07g49110.1 LOC_Os07g49110.1 LOC_Os01g48680.2 LOC_Os05g08390.1 LOC_Os06g06000.1 | glycosyl hydrolases family 16, putative, expressed BBTI7 - Bowman-Birk type bran trypsin inhibitor precursor, expressed auxin-responsive protein, putative, expressed bark storage protein A precursor, putative, expressed 39S ribosomal protein L46, mitochondrial precursor, putative, expressed EF hand family protein, putative, expressed D-alanineD-alanine ligase family, putative, expressed two pore calcium channel protein 1, putative, expressed expressed protein expressed protein | 00-01 osa:9271033 osa:9267088 osa:4324390 osa:4339897 osa:4340823 osa:4340823 osa:4344370 osa:4344370 osa:4325272 osa:9270309 osa:107277456 dosa:Os04t03375 0-01 | Up Up Up Up Up Up Up Up Up | - |
| 339 340 341 342 343 344 345 346 347 348 349 | LOC_Os08g14200.1 LOC_Os01g03390.1 LOC_Os01g48850.1 LOC_Os06g02210.1 LOC_Os06g19640.1 LOC_Os06g19640.1 LOC_Os10g09850.1 LOC_Os07g49110.1 LOC_Os01g48680.2 LOC_Os05g08390.1 LOC_Os06g06000.1 LOC_Os04g26870.1 | glycosyl hydrolases family 16, putative, expressed BBTI7 - Bowman-Birk type bran trypsin inhibitor precursor, expressed auxin-responsive protein, putative, expressed bark storage protein A precursor, putative, expressed 39S ribosomal protein L46, mitochondrial precursor, putative, expressed EF hand family protein, putative, expressed D-alanineD-alanine ligase family, putative, expressed two pore calcium channel protein 1, putative, expressed expressed protein expressed protein oxidoreductase, aldo/keto reductase family protein, putative, expressed | 00-01 osa:9271033 osa:9267088 osa:4324390 osa:4339897 osa:4340823 osa:4340823 osa:4344370 osa:4344370 osa:4325272 osa:9270309 osa:107277456 dosa:Os04t03375 00-01 osa:4342463 | Up Up Up Up Up Up Up Up Up Up | - |

| 35 | 53 | LOC_Os12g31780.1 | nitrilase-associated protein, putative, expressed | osa:4352277 | Up | - |
|----|----|------------------|---|--------------------------|------|---|
| 35 | 54 | LOC_Os03g63450.1 | snRK1-interacting protein 1, putative, expressed | osa:4334803 | Up | - |
| 35 | 55 | LOC_Os04g22080.1 | retrotransposon protein, putative, unclassified, expressed | osa:4335390 | Up | - |
| 35 | 56 | LOC_Os06g34790.1 | DUF538 domain containing protein, putative, expressed | osa:4341223 | Up | - |
| 35 | 57 | LOC_Os07g43070.1 | expressed protein | osa:4343957 | Up | - |
| 35 | 58 | LOC_Os10g35190.1 | ZOS10-06 - C2H2 zinc finger protein, expressed | osa:4348994 | Up | - |
| 35 | 59 | LOC_Os08g02060.1 | expressed protein | osa:4344492 | Up | - |
| 36 | 50 | LOC_Os08g31860.1 | expressed protein | osa:4345562 | Up | - |
| 36 | 51 | LOC_Os02g06930.1 | protein kinase, putative, expressed | osa:4328408 | Up | - |
| 36 | 52 | LOC_Os07g01560.1 | transporter family protein, putative, expressed | osa:4342198 | Up | - |
| 36 | 53 | LOC_Os01g18744.1 | transferase family protein, putative, expressed | osa:4325160 | Up | - |
| 36 | 54 | LOC_Os02g52290.1 | peptidyl-prolyl cis-trans isomerase, FKBP-type, putative, expressed | osa:4330800 | Up | - |
| 36 | 65 | LOC_Os11g01600.1 | macrophage migration inhibitory factor, putative, expressed | osa:4351273 | Up | - |
| 36 | 66 | LOC_Os09g28720.1 | alpha/beta hydrolase fold, putative, expressed | osa:4347291 | Up | - |
| 36 | 67 | LOC_Os07g29610.1 | PQ loop repeat domain containing protein, expressed | osa:4343225 | Up | - |
| 36 | 58 | LOC_Os02g43660.1 | plastocyanin-like domain containing protein, putative, expressed | osa:4330178 | Up | - |
| 36 | 59 | LOC_Os07g46910.1 | sex determination protein tasselseed-2, putative, expressed | osa:4344203 | Up | - |
| 37 | 70 | LOC_Os06g35650.1 | reticuline oxidase-like protein precursor, putative, expressed | osa:4341259 | Up | - |
| 37 | 71 | LOC_Os07g38620.1 | pyridoxamine 5'-phosphate oxidase family protein, putative, expressed | osa:4343688 | Up | - |
| 37 | 72 | LOC_Os02g28900.1 | cytokinin-O-glucosyltransferase 2, putative, expressed | osa:4329386 | Up | - |
| 37 | 73 | LOC_Os07g26630.1 | aquaporin protein, putative, expressed | osa:4343119 | Up | - |
| 37 | 74 | LOC_Os10g28120.1 | glycosyl hydrolase, putative, expressed | osa:4348634 | Up | - |
| 37 | 75 | LOC_Os12g40490.1 | LIM domain-containing protein, putative, expressed | osa:4352699 | Up | - |
| 37 | 76 | LOC_Os05g45110.1 | anthocyanidin 5,3-O-glucosyltransferase, putative, expressed | osa:107276526 | Up | - |
| 37 | 77 | LOC_Os08g03520.1 | retrotransposon protein, putative, Ty1-copia subclass, expressed | osa:4344581 | Up | - |
| 37 | 78 | LOC_Os10g37240.2 | expressed protein | dosa:Os10t05165 00-01 | Up | - |
| 37 | 79 | LOC_Os03g46190.2 | parafibromin, putative, expressed | osa:4333654 | Up | - |
| 38 | 30 | LOC_Os01g74460.1 | vacuolar fusion protein MON1 homolog A, putative, expressed | osa:4324304 | Up | - |
| 38 | 31 | LOC_Os03g46770.1 | RNA recognition motif containing protein, expressed | osa:4333690 | Up | - |
| 38 | 32 | LOC_Os04g37690.1 | RNA recognition motif containing protein, putative, expressed | dosa:Os04t04499 00-01 | Down | - |
| 38 | 33 | LOC_Os11g47970.1 | AAA-type ATPase family protein, putative, expressed | osa:4351224 | Down | - |
| 38 | 34 | LOC_Os09g36350.1 | endoglucanase, putative, expressed | osa:4347685 | Down | - |
| 38 | 35 | LOC_Os08g28190.1 | actin, putative, expressed | osa:4345402 | Down | - |
| | | | | | | |

| 386 | LOC_Os05g02940.1 | calcium-transporting ATPase 2, endoplasmic reticulum-type, putative, expressed | osa:4337647 | Down | - |
|-----|------------------|---|--------------------------|------|---|
| 387 | LOC_Os01g45830.1 | sulfate transporter, putative, expressed | osa:4325919 | Down | - |
| 388 | LOC_Os03g06980.1 | nucleic acid binding protein, putative, expressed | dosa:Os03t01660 00-01 | Down | - |
| 389 | LOC_Os02g32690.1 | pleiotropic drug resistance protein 15, putative, expressed | egu:105040086 | Down | - |
| 390 | LOC_Os04g52540.1 | retrotransposon protein, putative, unclassified, expressed | osa:4336991 | Down | - |
| 391 | LOC_Os06g19620.1 | SFT2, putative, expressed | osa:4340821 | Down | - |
| 392 | LOC_Os01g70840.2 | esterase, putative, expressed | osa:4326787 | Down | - |
| 393 | LOC_Os10g26660.1 | expressed protein | osa:4348588 | Down | - |
| 394 | LOC_Os05g22990.1 | expressed protein | osa:4338325 | Down | - |
| 395 | LOC_Os06g38550.1 | expressed protein | osa:4341393 | Down | - |
| 396 | LOC_Os01g42030.1 | mitochondrial chaperone BCS1, putative, expressed | osa:4324105 | Down | - |
| 397 | LOC_Os05g04584.1 | transferase family protein, putative, expressed | osa:4337739 | Down | - |
| 398 | LOC_Os07g45950.1 | expressed protein | dosa:Os07t06530 00-00 | Down | - |
| 399 | LOC_Os04g14654.1 | Sec1 family transport protein, putative, expressed | dosa:Os04t02230 00-01 | Down | - |
| 400 | LOC_Os01g20206.1 | methyltransferase, putative, expressed | osa:107278642 | Down | - |
| 401 | LOC_Os01g41810.1 | cytochrome P450 72A1, putative, expressed | osa:4324604 | Down | - |
| 402 | LOC_Os02g18820.1 | WD domain, G-beta repeat domain containing protein, expressed | osa:4329056 | Down | - |
| 403 | LOC_Os05g38720.1 | Lung seven transmembrane receptor domain containing protein, putative, expressed | osa:4339027 | Down | - |
| 404 | LOC_Os11g25454.1 | cytokinin-N-glucosyltransferase 1, putative, expressed | osa:4350423 | Down | - |
| 405 | LOC_Os01g45110.1 | anthocyanin 3-O-beta-glucosyltransferase, putative, expressed | osa:4326578 | Down | - |
| 406 | LOC_Os09g37200.1 | transferase family protein, putative, expressed | osa:4347748 | Down | - |
| 407 | LOC_Os09g36300.1 | OsLonP4 - Putative Lon protease homologue, expressed | osa:4347683 | Down | - |
| 408 | LOC_Os01g65700.1 | expressed protein | osa:4324836 | Down | - |
| 409 | LOC_Os02g14929.1 | T-complex protein, putative, expressed | osa:4328872 | Down | - |
| 410 | LOC_Os05g02060.1 | mitochondrial import inner membrane translocase subunit Tim17, putative, expressed | osa:4337595 | Down | - |
| 411 | LOC_Os03g30430.1 | nitrilase-associated protein, putative, expressed | osa:9269934 | Down | - |
| 412 | LOC_Os04g42840.1 | HEAT repeat family protein, putative, expressed | osa:4336347 | Down | - |
| 413 | LOC_Os09g36860.1 | acyl carrier protein, putative, expressed | osa:4347723 | Down | - |
| 414 | LOC_Os02g01790.2 | expressed protein | osa:4328027 | Down | - |
| 415 | LOC_Os04g50890.1 | secretory carrier-associated membrane protein, putative, expressed | osa:4336849 | Down | - |
| 416 | LOC_Os01g50200.1 | UDP-glucoronosyl and UDP-glucosyl transferase domain containing protein, expressed | osa:4325293 | Down | - |
| 417 | LOC_Os09g28160.1 | phosphate carrier protein, mitochondrial precursor, putative, expressed | osa:4347248 | Down | - |
| | | | | | |

| 418 | LOC_Os06g49140.1 | ribosomal RNA large subunit methyltransferase J, putative, expressed | osa:4342000 | Down | - |
|-----|------------------|--|--------------------------|------|---|
| 419 | LOC_Os01g12940.1 | phosphorylase domain containing protein, putative, expressed | obr:102700482 | Down | - |
| 420 | LOC_Os02g12760.1 | integral membrane protein, putative, expressed | osa:9269252 | Down | - |
| 421 | LOC_Os04g36660.1 | calmodulin binding protein, putative, expressed | osa:4335948 | Down | - |
| 422 | LOC_Os05g32130.1 | expressed protein | obr:102712909 | Down | - |
| 423 | LOC_Os05g19910.1 | transferase family protein, putative, expressed | osa:4338283 | Down | - |
| 424 | LOC_Os06g14490.1 | calmodulin-binding heat-shock protein, putative, expressed | dosa:Os06t02563 00-01 | Down | - |
| 425 | LOC_Os02g38820.1 | expressed protein | osa:4329888 | Down | - |
| 426 | LOC_Os05g37230.1 | retrotransposon protein, putative, Ty3-gypsy subclass, expressed | bdi:106866389 | Down | - |
| 427 | LOC_Os11g06760.1 | protein of unknown function domain containing protein, expressed | osa:4349880 | Down | - |
| 428 | LOC_Os12g28137.1 | ATPase 3, putative, expressed | osa:107275748 | Down | - |
| 429 | LOC_Os07g36200.1 | eukaryotic translation initiation factor-related, putative, expressed | osa:4343524 | Down | - |
| 430 | LOC_Os10g30560.1 | UDP-glucoronosyl and UDP-glucosyl transferase domain containing protein, expressed | dosa:Os10t04424 00-01 | Down | - |
| 431 | LOC_Os01g70200.1 | exostosin family domain containing protein, expressed | osa:4327243 | Down | - |
| 432 | LOC_Os05g07040.1 | PHD finger protein, putative, expressed | osa:4337899 | Down | - |
| 433 | LOC_Os02g45110.1 | MT-A70 domain containing protein, expressed | osa:4330284 | Down | - |
| 434 | LOC_Os01g09540.1 | HAD superfamily phosphatase, putative, expressed | osa:4327297 | Down | - |
| 435 | LOC_Os06g37640.1 | expressed protein | osa:4341363 | Down | - |
| 436 | LOC_Os03g62090.1 | CESA5 - cellulose synthase, expressed | osa:4334710 | Down | - |
| 437 | LOC_Os04g57020.1 | expressed protein | osa:4337320 | Down | - |
| 438 | LOC_Os03g45720.1 | glyoxalase family protein, putative, expressed | osa:4333625 | Down | - |
| 439 | LOC_Os08g02080.1 | rickettsia 17 kDa surface antigen family protein, expressed | osa:4344494 | Down | - |
| 440 | LOC_Os10g42940.1 | miro, putative, expressed | osa:4349518 | Down | - |
| 441 | LOC_Os04g40490.1 | glycosyl hydrolase family 5 protein, putative, expressed | osa:4336181 | Down | - |
| 442 | LOC_Os06g21550.1 | thioredoxin domain-containing protein 17, putative, expressed | osa:4340888 | Down | - |
| 443 | LOC_Os09g39960.1 | dynamin family protein, putative, expressed | osa:4347929 | Down | - |
| 444 | LOC_Os05g50490.1 | X8 domain containing protein, expressed | osa:4339730 | Down | - |
| 445 | LOC_Os11g02150.1 | saposin-like type B, region 1 family protein, putative, expressed | osa:4349589 | Down | - |
| 446 | LOC_Os06g38940.1 | RMD5 homolog A, putative, expressed | osa:4341403 | Down | - |
| 447 | LOC_Os04g59394.1 | expressed protein | osa:4337495 | Down | - |
| 448 | LOC_Os01g37000.1 | carboxyl-terminal peptidase, putative, expressed | osa:4325841 | Down | - |
| 449 | LOC_Os03g55110.1 | 26S proteasome non-ATPase regulatory subunit 10, putative, expressed | osa:4334173 | Down | - |
| 450 | LOC_Os01g51570.1 | glycosyl hydrolases family 17, putative, expressed | osa:4325938 | Down | - |

| 451 | LOC_Os10g40710.1 | expansin precursor, putative, expressed | osa:4349348 | Down | - |
|-----|------------------|---|-------------|------|---|
| 452 | LOC_Os05g09580.1 | expressed protein | osa:4338014 | Down | - |
| 453 | LOC_Os07g44940.1 | ATP12 ATPase, putative, expressed | osa:4344085 | Down | - |
| 454 | LOC_Os02g08490.1 | chaperone protein clpB 1, putative, expressed | osa:4328515 | Down | - |
| 455 | LOC_Os07g38580.1 | zinc finger family protein, putative, expressed | osa:4343683 | Down | - |
| 456 | LOC_Os10g32700.1 | hypersensitive-induced response protein, putative, expressed | osa:4348831 | Down | - |
| 457 | LOC_Os06g39140.1 | hemoglobin-like protein HbO, putative, expressed | osa:4341418 | Down | - |
| 458 | LOC_Os05g13970.2 | phosphorylase domain containing protein, putative, expressed | osa:4338154 | Down | - |
| 459 | LOC_Os03g42130.1 | gibberellin 20 oxidase 2, putative, expressed | osa:4333459 | Down | - |
| 460 | LOC_Os05g31140.1 | glycosyl hydrolases family 17, putative, expressed | osa:4338611 | Down | - |
| 461 | LOC_Os02g45480.1 | nucleic acid binding protein, putative, expressed | osa:9271844 | Down | - |
| 462 | LOC_Os03g58790.1 | ATPase, putative, expressed | osa:4334467 | Down | - |
| 463 | LOC_Os02g40500.1 | OsGrx_C2.1 - glutaredoxin subgroup I, expressed | osa:4329999 | Down | - |
| 464 | LOC_Os01g56420.1 | ctr copper transporter family protein, putative, expressed | osa:4324610 | Down | - |
| 465 | LOC_Os01g62260.1 | thaumatin, putative, expressed | osa:4327387 | Down | - |
| 466 | LOC_Os09g39070.1 | thiol protease SEN102 precursor, putative, expressed | osa:4347868 | Down | - |
| 467 | LOC_Os02g58250.1 | expressed protein | osa:4331238 | Down | - |
| 468 | LOC_Os10g36690.4 | dehydration response related protein, putative, expressed | osa:4349089 | Down | - |
| 469 | LOC_Os05g36010.1 | OsSub47 - Putative Subtilisin homologue, expressed | osa:4338899 | Down | - |
| 470 | LOC_Os06g16280.1 | expressed protein | osa:4340740 | Down | - |
| 471 | LOC_Os10g42630.1 | expressed protein | osa:4349495 | Down | - |
| 472 | LOC_Os02g33820.1 | abscisic stress-ripening, putative, expressed | osa:4329601 | Down | - |
| 473 | LOC_Os01g15340.1 | flowering promoting factor-like 1, putative, expressed | osa:4326229 | Down | - |
| 474 | LOC_Os02g57470.1 | tetratricopeptide repeat containing protein, putative, expressed | osa:4331168 | Down | - |
| 475 | LOC_Os04g24600.1 | cysteine proteinase 1 precursor, putative, expressed | osa:4335455 | Down | - |
| 476 | LOC_Os05g47700.1 | LTPL152 - Protease inhibitor/seed storage/LTP family protein precursor, expressed | osa:4339526 | Down | - |
| 477 | LOC_Os01g08470.1 | retrotransposon protein, putative, unclassified, expressed | osa:4325349 | Down | - |
| 478 | LOC_Os11g44430.1 | protein kinase, putative, expressed | osa:4351079 | Down | - |
| 479 | LOC_Os05g34500.1 | expressed protein | osa:9268643 | Down | - |
| 480 | LOC_Os05g01600.2 | actin, putative, expressed | osa:4337566 | Down | - |
| 481 | LOC_Os01g06460.1 | uncharacterized Cys-rich domain containing protein, putative, expressed | osa:4324087 | Down | - |
| 482 | LOC_Os03g56500.1 | expressed protein | osa:4334292 | Down | - |
| 483 | LOC_Os03g63700.1 | AIG2-like family domain containing protein, expressed | osa:4334822 | Down | - |
| 484 | LOC_Os06g19650.1 | expressed protein | osa:4340824 | Down | - |
| | | | | | |

| 485 | LOC_Os05g49840.1 | phospholipase, putative, expressed | osa:4339680 | Down | - |
|-----|------------------|---|--------------------------|------|---|
| 486 | LOC_Os01g71090.1 | xylanase inhibitor, putative, expressed | osa:4326530 | Down | - |
| 487 | LOC_Os04g44900.1 | lectin-like receptor kinase, putative, expressed | osa:4336489 | Down | - |
| 488 | LOC_Os08g42590.3 | mtN19, putative, expressed | osa:4346175 | Down | - |
| 489 | LOC_Os07g29450.1 | expressed protein | dosa:Os07t04775 00-01 | Down | - |
| 490 | LOC_Os11g01140.1 | AGC_PVPK_like_kin82y.18 - ACG kinases include homologs to PKA, PKG and PKC, expressed | osa:4349531 | Down | - |
| 491 | LOC_Os06g12180.1 | jacalin-like lectin domain containing protein, expressed | osa:9269817 | Down | - |
| 492 | LOC_Os07g41340.1 | B12D protein, putative, expressed | osa:4343847 | Down | - |
| 493 | LOC_Os03g25480.1 | cytochrome P450, putative, expressed | osa:4332937 | Down | - |
| 494 | LOC_Os02g38050.1 | joka2, putative, expressed | osa:4329846 | Down | - |
| 495 | LOC_Os02g40710.1 | ammonium transporter protein, putative, expressed | osa:4330007 | Down | - |
| 496 | LOC_Os01g71860.1 | glycosyl hydrolases family 17, putative, expressed | osa:4325834 | Down | - |
| 497 | LOC_Os04g40500.1 | glycosyl hydrolase family 5 protein, putative, expressed | osa:107276528 | Down | - |
| 498 | LOC_Os07g19530.1 | peptidase, putative, expressed | osa:4342962 | Down | - |
| 499 | LOC_Os02g40730.1 | ammonium transporter protein, putative, expressed | osa:4330008 | Down | - |
| 500 | LOC_Os03g15340.1 | plastocyanin-like domain containing protein, putative, expressed | osa:4332309 | Down | - |
| 501 | LOC_Os01g21070.1 | endoglucanase, putative, expressed | osa:4327286 | Down | - |
| 502 | LOC_Os03g54000.1 | oligopeptide transporter, putative, expressed | osa:4334129 | Down | - |
| 503 | LOC_Os04g44910.1 | receptor like protein kinase, putative, expressed | osa:4336490 | Down | - |
| 504 | LOC_Os11g39450.1 | cysteine-rich receptor-like protein kinase 7 precursor, putative, expressed | dosa:Os11t06083 00-01 | Down | - |
| 505 | LOC_Os07g34900.1 | aspartic proteinase nepenthesin precursor, putative, expressed | dosa:Os07t05333 00-00 | Down | - |
| 506 | LOC_Os12g38770.1 | nucleotide pyrophosphatase/phosphodiesterase, putative, expressed | osa:9268839 | Down | - |
| 507 | LOC_Os10g39380.1 | aspartic proteinase nepenthesin-1 precursor, putative, expressed | osa:107276470 | Down | - |
| 508 | LOC_Os04g33060.1 | NAD dependent epimerase/dehydratase family protein, putative, expressed | osa:4335739 | Down | - |
| 509 | LOC_Os03g16960.1 | cysteine-rich repeat secretory protein 55 precursor, putative, expressed | osa:4332423 | Down | - |
| 510 | LOC_Os01g70850.1 | esterase, putative, expressed | osa:4326788 | Down | - |
| 511 | LOC_Os07g48500.1 | stress responsive protein, putative, expressed | dosa:Os07t06840 00-01 | Down | - |
| 512 | LOC_Os07g36130.1 | core histone H2A/H2B/H3/H4, putative, expressed | osa:4343518 | Down | - |
| 513 | LOC_Os06g12590.1 | protein kinase, putative, expressed | osa:4340578 | Down | - |

 Table S2 List of the primers used in this studay.

| Primers | Forward | Reverse primer |
|-----------------|--------------------------------|-------------------------------|
| LOC_Os11g11960. | 1 5'-ATCCCTAAGTTGGTGTCATCTC-3' | 5'-TTTAGTTTGGGGGAATGCCTTTG-3' |
| LOC_Os02g46090. | 1 5'-ATGGCAGTGGTTATATTACGGT-3' | 5'-ATGCGACCATCATTATCCTGAT-3' |
| LOC_Os09g14510. | 1 5'-TATGCCTGAAGTGGAACTCTTT-3' | 5'-TGTTCTAATGGCAAAATTCGGG-3' |
| LOC_Os01g06600. | 1 5'-GAATTGTTGGGTGGAAATGGAA-3' | 5'-CGTATGTGCCTTCGTATGAGTA-3' |
| LOC_Os09g23560. | 1 5'-TCCTAGGCTCCTAGCTATGTAG-3' | 5'-TTTCAAGTTTCCATCGTGTACG-3' |
| LOC_Os10g06540. | 1 5'-CCTCCACCATGCAAGACAGT-3' | 5'-TCCACAGAAAGCAGCGATGA-3' |
| LOC_Os05g15530. | 1 5'-ATCTGCATCCAAAGCAAAGATC-3' | 5'-TACTTGATCGAGCCATTCCTG-3' |
| LOC_Os03g39850. | 1 5'-GCTCAAGGGAGTAGCTTATGAG-3' | 5'-CTTCTTGTGGATGGGGTTCTT-3' |
| LOC_Os01g22490. | 1 5'-ACCACTTCGACCGCCACTACT-3' | 5'-ACGCCTAAGCCTGCTGGTT-3' |