

Table S1 Gene ontology (GO) enrichment analysis of the candidate genes

Ontology	GO ID	GO Term	Genes
Molecular function	GO:0009987	cellular process	<i>Glyma.03G036200, Glyma.03G035100, Glyma.03G035300, Glyma.03G036000</i>
	GO:0030554	adenyl nucleotide binding	<i>Glyma.03G034900, Glyma.03G034800, Glyma.03G035300, Glyma.03G034400, Glyma.03G036000, Glyma.03G034500</i>
	GO:0032553	ribonucleotide binding	<i>Glyma.03G034900, Glyma.03G034800, Glyma.03G035300, Glyma.03G034400, Glyma.03G036000</i>
	GO:0032559	adenyl ribonucleotide binding	<i>Glyma.03G034900, Glyma.03G034800, Glyma.03G035300, Glyma.03G034400, Glyma.03G036000, Glyma.03G034500</i>
	GO:0032555	purine ribonucleotide binding	<i>Glyma.03G034900, Glyma.03G034800, Glyma.03G035300, Glyma.03G034400, Glyma.03G036000, Glyma.03G034500</i>
	GO:0001883	purine nucleoside binding	<i>Glyma.03G034900, Glyma.03G034800, Glyma.03G035300, Glyma.03G034400, Glyma.03G036000, Glyma.03G034500</i>
	GO:0001882	nucleoside binding	<i>Glyma.03G034900, Glyma.03G034800, Glyma.03G035300, Glyma.03G034400, Glyma.03G036000, Glyma.03G034500</i>
	GO:0017076	purine nucleotide binding	<i>Glyma.03G034900, Glyma.03G034800, Glyma.03G035300, Glyma.03G034400, Glyma.03G036000</i>
	GO:0000166	nucleotide binding	<i>Glyma.03G034900, Glyma.03G034800, Glyma.03G035300, Glyma.03G034400, Glyma.03G036000, Glyma.03G034500</i>
	GO:0005488	binding	<i>Glyma.03G034800, Glyma.03G034900, Glyma.03G035300, Glyma.03G034400, Glyma.03G035200, Glyma.03G036000, Glyma.03G034500</i>

Table S2 The biological process and molecular function ontology of the candidate genes

Genes	GO terms
<i>Glyma.03G034400</i>	GO:0043531 ADP binding
<i>Glyma.03G034500</i>	GO:0043531 ADP binding
<i>Glyma.03G034800</i>	GO:0005515 protein binding GO:0043531 ADP binding
<i>Glyma.03G034900</i>	GO:0005515 protein binding GO:0043531 ADP binding
<i>Glyma.03G035100</i>	GO:0003678 DNA helicase activity GO:0000723 telomere maintenance GO:0006281 DNA repair
<i>Glyma.03G035200</i>	GO:0008270 zinc ion binding GO:0003677 DNA binding
<i>Glyma.03G035300</i>	GO:0006468 protein amino acid phosphorylation GO:0005524 ATP binding GO:0004672 protein kinase activity
<i>Glyma.03G036000</i>	GO:0006468 protein amino acid phosphorylation GO:0005524 ATP binding GO:0004672 protein kinase activity
<i>Glyma.03G036200</i>	GO:0015297 antiporter activity GO:0016020 membrane GO:0006855 multidrug transport GO:0015238 drug transmembrane transporter activity

Table S3 Primers of the candidate genes for real-time PCR

Gene ID	Upstream primers	ownstream primers	Tm( °C)
<i>Glyma.03G034400</i>	TGGCATCAAGTCCTTCCCTAA	GTGAGATGGAGAAGCCCTGTG	58
<i>Glyma.03G034500</i>	TGTCATTTCCAGGTGGTCGTT	AAGCAGGATCTCCTTCTGGTCTC	59
<i>Glyma.03G034800</i>	GATCTAGCCACATCACTCGG	ATGATACATCGTGCCTCCTC	54
<i>Glyma.03G034900</i>	ATTAAGGGATTGCTCGTCAG	CTCGGAGATTTGGAAAGGTA	54
<i>Glyma.03G035300</i>	TTTCAGCAGCCAACATACAGATT	CTGACAGGTTTCCAACAGCACAT	58
<i>Glyma.03G035900</i>	CAGATTACAGTCGGACGTAGGC	GATGAAGGATTTTCGGAAGAGA	56
<i>Glyma.03G036000</i>	AAGATCCTAACATGAGACCAAGC	AGAAAACAAGTGCCGAATAAACG	56
<i>Actin</i>	CGGTGGTTCTATCTTGGCATC	GTCTTTCGCTTCAATAACCCTA	55