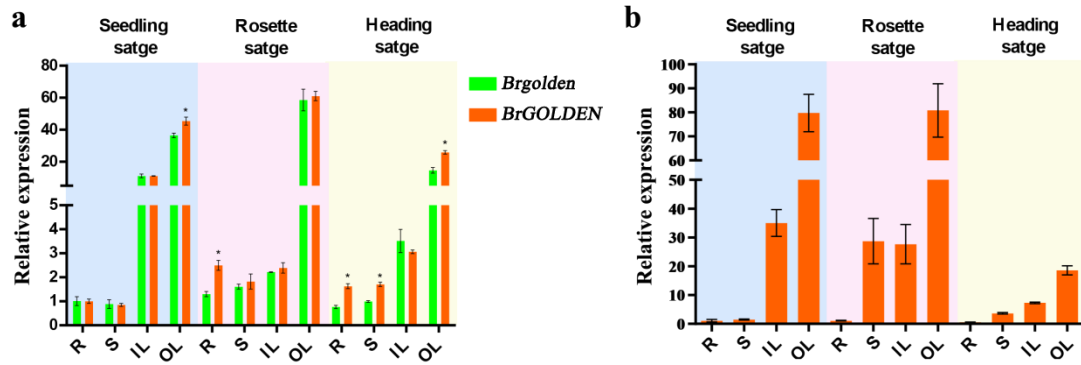


## Supplementary Figures

<i>Brgolden</i> <sub>wt</sub>	MSCLGRILSVSHPPDFYGSRRFSVSKLSSPGRNQRLRWRFTALDSDSSSLDSDSSDKFASG	60
<i>BrGOLDEN</i> <sub>Ins</sub>	MSCLGRILSVSYPPDFSGSRLSVSKLSSPGRNRRLRWRFTALDSDSSSLDSDSSDKFAAG	60
<i>BrGOLDEN</i> <sub>Del</sub>	MSCLGRILSVSYPPDFSGSRLSVSKLSSPGRNRRLRWRFTALDSDSSSLDSDSSDKFAAG	60
<i>BrGOLDEN</i> <sub>Ldel</sub>	MSCLGRILSVSYPPDFSGSRLSVSKLSSPGRNRRLRWRFTALDSDSSSLDSDSSDKFAAG	60
Consensus	msclgrilsvsyppdpsgsrlsvsklsspgnrnrlrwrftaldsdssslsdssdkfaag	
<i>Brgolden</i> <sub>wt</sub>	FCIIEGPETVQDFAKMQLQEIQDNIRSRNKIFLHMEEVRRRLRIQQRIRNTELGIIDEEQ	120
<i>BrGOLDEN</i> <sub>Ins</sub>	FCIIEGPETVQDFAKMQLQEIQDNIRSRNKIFLHMEEVRRRLRIQQRIRNTELGIIDEEQ	120
<i>BrGOLDEN</i> <sub>Del</sub>	FCIIEGPETVQDFAKMQLQEIQDNIRSRNKIFLHMEEVRRRLRIQQRIRNTELGIIDEEQ	120
<i>BrGOLDEN</i> <sub>Ldel</sub>	FCIIEGPETVQDFAKMQLQEIQDNIRSRNKIFLHMEEVRRRLRIQQRIRNTELGIIDEEQ	120
Consensus	fciiegpvetvqdfakmqlqeiqdnirsrnkiflhmeevrrlriqqrirntelgiideeq	
<i>Brgolden</i> <sub>wt</sub>	EHEL.....PNFPSFIFPLPPI...TAANLRVYYATCFSLIAGIILFGGLLAPTL	167
<i>BrGOLDEN</i> <sub>Ins</sub>	EHELKSQNPNLIIQHEL...PNFPSFIFPLPPI...TAANLRVYYATCFSLIAGIILFGGLLAPTL	180
<i>BrGOLDEN</i> <sub>Del</sub>	EHELKSQNPNL.....TAANLRVYYATCFSLIAGIILFGGLLAPTL	161
<i>BrGOLDEN</i> <sub>Ldel</sub>	EHELKSQNPNL.....L	132
Consensus	ehelksqnpnlpnfpsfiflplptaanlrvyatcfsliaagiilfggllaptl	
<i>Brgolden</i> <sub>wt</sub>	ELKLIGIGTSYKDFIQSLHLPMLQSQVDPIVASFSGGAVGVISALMVVEVNNVKQGEHKKR	227
<i>BrGOLDEN</i> <sub>Ins</sub>	ELKLIGIGTSYKDFIQSLHLPMLQSQVDPIVASFSGGAVGVISALMVVEVNNVKQGEHKKR	240
<i>BrGOLDEN</i> <sub>Del</sub>	ELKLIGIGTSYKDFIQSLHLPMLQSQVDPIVASFSGGAVGVISALMVVEVNNVKQGEHKKR	221
<i>BrGOLDEN</i> <sub>Ldel</sub>	ELKLIGIGTSYKDFIQSLHLPMLQSQVDPIVASFSGGAVGVISALMVVEVNNVKQGEHKKR	192
Consensus	elkligigtsykdfiqslhlpmlsqvdpivasfsggavgvisalmvvevnnvkqgehkr	
<i>Brgolden</i> <sub>wt</sub>	CKYCLGTGYLACARCSSTGSLIIEFPVSAIAGGNHSVSTSKTERCSNCSGAGKVMCPTCL	287
<i>BrGOLDEN</i> <sub>Ins</sub>	CKYCLGTGYLACARCSSTGSLIIEFPVSAIAGGNHSVSTSKTERCSNCSGAGKVMCPTCL	300
<i>BrGOLDEN</i> <sub>Del</sub>	CKYCLGTGYLACARCSSTGSLIIEFPVSAIAGGNHSVSTSKTERCSNCSGAGKVMCPTCL	281
<i>BrGOLDEN</i> <sub>Ldel</sub>	CKYCLGTGYLACARCSSTGSLIIEFPVSAIAGGNHSVSTSKTERCSNCSGAGKVMCPTCL	252
Consensus	ckyclgtgylacarcstgsliefpvsaiaggnhsvstsktercsncsgagkvmcptcl	
	CxxCxGxG CxxCxSxG CxxCxGxG CxxCx	
<i>Brgolden</i> <sub>wt</sub>	CTGVAMASEHDPRIDPFI.....	305
<i>BrGOLDEN</i> <sub>Ins</sub>	CTGVAMASEHDPRIDPFI.....	318
<i>BrGOLDEN</i> <sub>Del</sub>	CTGVAMASEHDPRIDPFI.....	299
<i>BrGOLDEN</i> <sub>Ldel</sub>	CTGVAMASEHDPRIDPFI.....	270
Consensus	ctgvamasehdpridpfi	
	CxG	

Figure S1. Comparison of amino acid sequences of five transcripts. Red words indicate four conserved C××C×××G motifs.

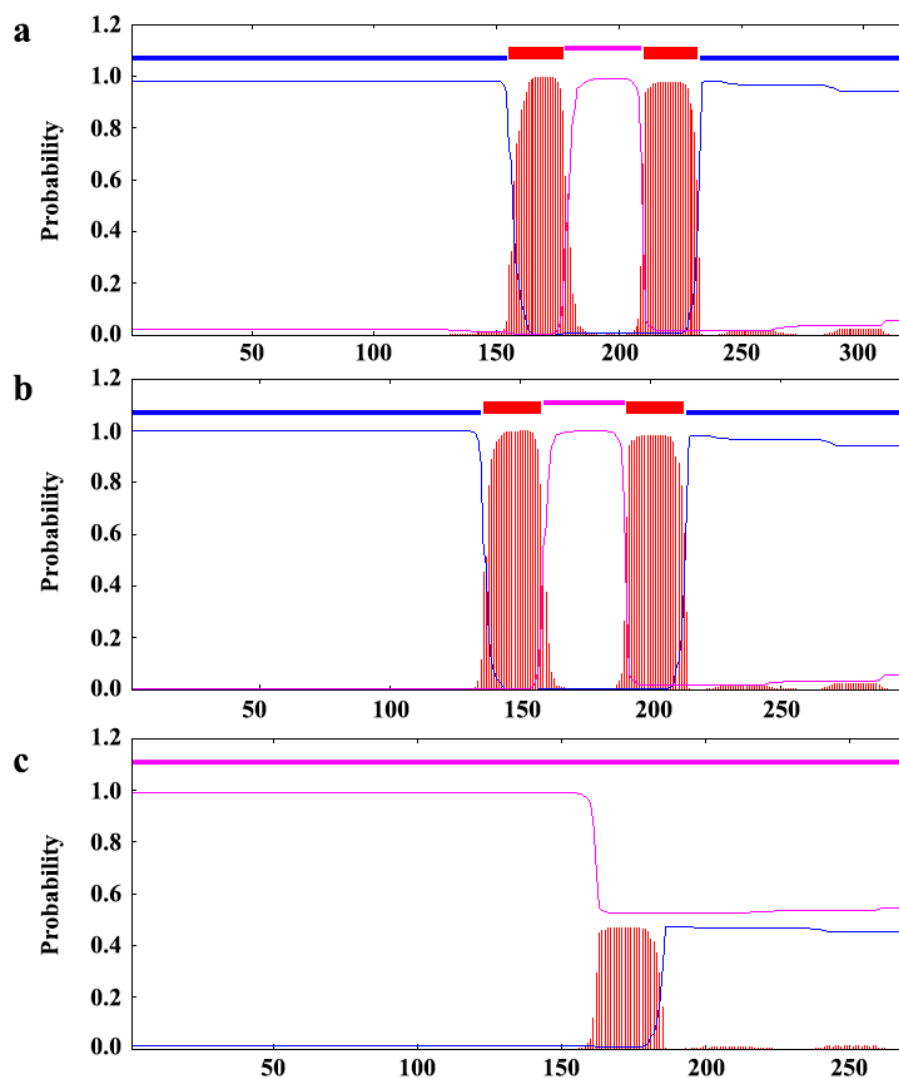


**Figure S2. Comparison of *Brgolden* and *BrGOLDEN* expression in lines '1900262' and '1900264'.**

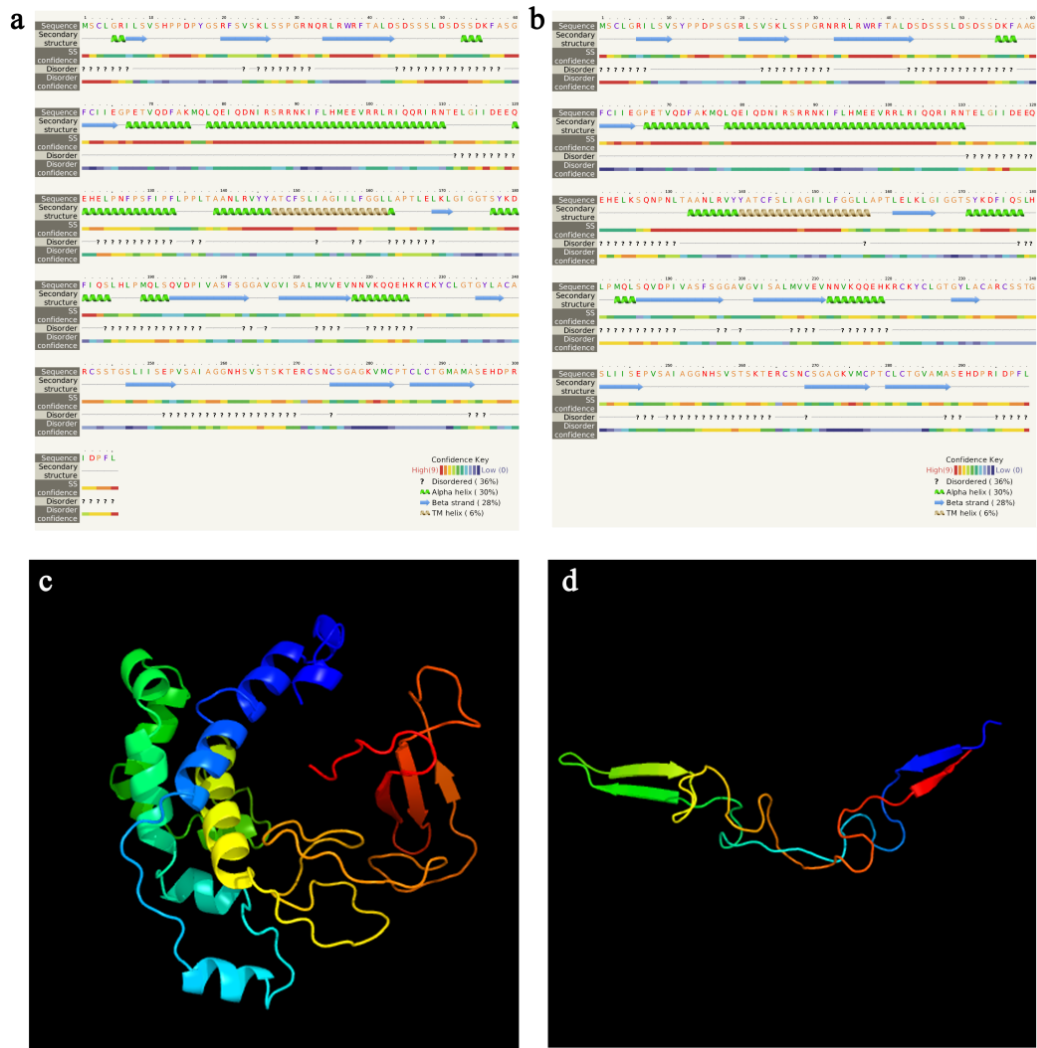
(a) Expression comparison of the *Brgolden* and *BrGOLDEN* in different periods of the line '1900264'.

(b) Expression analysis of *Brgolden* in line '1900262'. R: roots; S: short stems; IL: inner leaves; and

OL: outer leaves. Asterisk (\*) indicates that there is a statistical difference,  $P \leq 0.05$ ,  $n = 3$ .



**Figure S3. Prediction of transmembrane helices in BrGOLDEN proteins.** Analysis of transmembrane domains of BrGOLDEN<sub>Ins</sub> (a), BrGOLDEN<sub>Del</sub> (b), and BrGOLDEN<sub>Ldel</sub> (c). Red lines represent the transmembrane. Blue lines represent the inside. Pink lines represent the outside. The abscissa indicates the amino acid site.



**Figure S4 Phyre2 predicts protein structure.** Brgolden<sub>wt</sub> (a) and BrGOLDEN<sub>Del</sub> (b) proteins structure prediction; Three-dimensional (3D) model analysis of Brgolden<sub>wt</sub> (c) and BrGOLDEN<sub>Del</sub> (d).

BoOR-LTR AACACGAACTAAAGTCGAGAATCCGAACTTGGTATGATCGTATGAACACAAACTTAATAAACTTTGCTTTGTCTTATTAATCTTCTTAGCTTCTCTCTTTTTCTTATTAATAA  
GOLDEN-LTR AACACGAACTAAAGTCGAGAATCCGAACTTGGTATGATCGTATGAACACAAACTTAATAAACTTTGCTTTGTCTTATTAATCTTCTTAGCTTCTCTCTTTTTCTTATTAATAA  
\*\*\*\*\*  
BoOR-LTR ACTCTCTTACACTTAGGCTTCTTATATAGGCAATAGAAATCTTAACCTTATCTTATACATATTAATCTAGGAATCTTAACCTAGCTTATCTTTATCTCTAAATCTAATTGTATAAGTTAT  
GOLDEN-LTR ACTCTCTTACACTTAGGCTTCTTATATAGGCAATAGAAATCTTAACCTTATCTTATACATATTAATCTAGGAATCTTAACCTAGCTTATCTTTATCTCTAAATCTAATTGTATAAGTTAT  
\*\*\*\*\*  
BoOR-LTR TCCTCTTTCCTTTTTGAATAACTTATTACTCAAGTAACTTTGAAGCTTATCCAACTTCCTCTTTAAGCTTCAAACCACTTTCACTTAGGTTTGAACCTCAATCATGCACCTCATTT  
GOLDEN-LTR TCCTCTTTCCTTTTTGAATAACTTATTACTCAAGTAACTTTGAAGCTTATCCAACTTCCTCTTTAAGCTTCAAACCACTTTCACTTAGGTTTGAACCTCAATCATGCACCTCATTT  
\*\*\*\*\*  
BoOR-LTR CCTTGAATTTGATCTTGGCCAATGCTTAGTTAGGATGTCTGCTTCTGCTCTGTTCCCGGTACATGTTCCACATCAATGAGATTGGCTCAACACATTCCTCAATGAAGTAAACCTCT  
GOLDEN-LTR CCTTGAATTTGATCTTGGCCAATGCTTAGTTAGGATGTCTGCTTCTGCTCTGTTCCCGGTACATGTTCCACATCAATGAGATTGGCTCAACACATTCCTCAATGAAGTAAACCTCT  
\*\*\*\*\*  
BoOR-LTR TGTGGATATGCTTGTCTGTCGGTGAAGACTGGATTCTTTGCAAGAGATATAGCTGACTTGTATCGACTAGAATCAGTGTCTTCCGCTCACCTCTGTTACTTCACTCAAGAGTT  
GOLDEN-LTR TGTGGATATGCTTGTCTGTCGGTGAAGACTGGATTCTTTGCAAGAGATATAGCTGACTTGTATCGACTAGAATCAGTGTCTTCCGCTCACCTCTGTTACTTCACTCAAGAGTT  
\*\*\*\*\*  
BoOR-LTR CTTGTAAACAGATAGCTGTTTAGCAGCTCCGTTGACGCCATGAATCGGCTTCGACGAGTACAACGCCACTGTGCTTGTGTTCTGAGAGACCAAGTGAATGGTGTGTTCTAGAC  
GOLDEN-LTR CTTGTAAACAGATAGCTGTTTAGCAGCTCCGTTGACGCCATGAATCGGCTTCGACGAGTACAACGCCACTGTGCTTGTGTTCTGAGAGACCAAGTGAATGGTGTGTTCTAGAC  
\*\*\*\*\*  
BoOR-LTR AGAACAGGTGACTGTTGTGCTCTTCCATCGTCCGGATCAGTATTGTGACTACTGTCCGCTGACCCACAAGTTTCTGTACTTCCAGCTTTAACTCTAGACCATGCCGAGAGTT  
GOLDEN-LTR AGAACAGGTGACTGTTGTGCTCTTCCATCGTCCGGATCAGTATTGTGACTACTGTCCGCTGACCCACAAGTTTCTGTACTTCCAGCTTTAACTCTAGACCATGCCGAGAGTT  
\*\*\*\*\*  
BoOR-LTR CTTGTAGATATCTTAAACTTGCCTTAACGCATTCCCGTGAGACTCTCTCGGTTGATGATATATCTACTTAGGATCCCACTGAGTATGCCATGTCTGGCTAGTGTGATTAAGTACC  
GOLDEN-LTR CTTGTAGATATCTTAAACTTGCCTTAACGCATTCCCGTGAGACTCTCTCGGTTGATGATATATCTACTTAGGATCCCACTGAGTATGCCATGTCTGGCTAGTGTGATTAAGTACC  
\*\*\*\*\*  
BoOR-LTR TTAAGCACCACATCTTCTCGATATTGAGTTGATCAATCTCTGGTTTATCCAGTGCCCTTGAGAATTGTAGACCGAACTCCATTGGAATACAAATTTGGATTGCAATGGGCCATACCTG  
GOLDEN-LTR TTAAGCACCACATCTTCTCGATATTGAGTTGATCAATCTCTGGTTTATCCAGTGCCCTTGAGAATTGTAGACCGAACTCCATTGGAATACAAATTTGGATTGCAATGGGCCATACCTG  
\*\*\*\*\*  
BoOR-LTR ATTCTTCCATGATCCGTTTGCATAGGCTCTTGTGTTGATTGTGATCCCTCTAGTGCTCTGCTTACTTCAATGCCTAGATAATAGTTAGCAACCCGAGATCAGACATTTCAAACCTGT  
GOLDEN-LTR ATTCTTCCATGATCCGTTTGCATAGGCTCTTGTGTTGATTGTGATCCCTCTAGTGCTCTGCTTACTTCAATGCCTAGATAATAGTTAGCAACCCGAGATCAGACATTTCAAACCTGT  
\*\*\*\*\*  
BoOR-LTR GTGACATCGCTGTCTGAACTCTTTGATGATCTTTGTGAAATTTCCTGTAACAAGAGATCATCCACATATATTGCGATAATCAGAAGCTTATCTCCTCTCTCTCTCTGTAAGCCGAGC  
GOLDEN-LTR GTGACATCGCTGTCTGAACTCTTTGATGATCTTTGTGAAATTTCCTGTAACAAGAGATCATCCACATATATTGCGATAATCAGAAGCTTATCTCCTCTCTCTCTCTGTAAGCCGAGC  
\*\*\*\*\*  
BoOR-LTR TTTCTTTATGCACTTCTTGAACCGAACTCTTAAGAAGCGGATCGAGTTAGTATTCCAAGCGGAGGAGCTTGCTTAGACCATATAGTGCTTTGAGAGTTGAAACCTTTATGTT  
GOLDEN-LTR TTTCTTTATGCACTTCTTGAACCGAACTCTTAAGAAGCGGATCGAGTTAGTATTCCAAGCGGAGGAGCTTGCTTAGACCATATAGTGCTTTGAGAGTTGAAACCTTTATGTT  
\*\*\*\*\*  
BoOR-LTR CTCTCCCTTTTTTCAAACCTTCAGGTTGAGTTACATAGACTTCTTCATTCAATTCTCCATGTAAGAATGCCGCTTGGAGCTAGGTTGAGTGAAGTTCCCATCCCTTTGCGAAGCTA  
GOLDEN-LTR CTCTCCCTTTTTTCAAACCTTCAGGTTGAGTTACATAGACTTCTTCATTCAATTCTCCATGTAAGAATGCCGCTTGGAGCTAGGTTGAGTGAAGTTCCCATCCCTTTGCGAAGCTA  
\*\*\*\*\*  
BoOR-LTR AGCTGATTAAGAGTCGAATGGACTCTATACGAGCTACTGGAGCAACACTTCTTCAAAATCAATTCCATGCTCTTGATACATATCCCTTTGCTACAAGTCTTGCTTTGAATTTGTTGATTG  
GOLDEN-LTR AGCTGATTAAGAGTCGAATGGACTCTATACGAGCTACTGGAGCAACACTTCTTCAAAATCAATTCCATGCTCTTGATACATATCCCTTTGCTACAAGTCTTGCTTTGAATTTGTTGATTG  
\*\*\*\*\*  
BoOR-LTR ATCCATCTCGCTTCTTTTGATCTTGAAATCCACTTAAGACCAATGACTTTAACTCCGTGGCTTATCTACCAACTTCCATGTCTGGTTTCTGTTGATAGAGTCAATCTCATCTTCGC  
GOLDEN-LTR ATCCATCTCGCTTCTTTTGATCTTGAAATCCACTTAAGACCAATGACTTTAACTCCGTGGCTTATCTACCAACTTCCATGTCTGGTTTCTGTTGATAGAGTCAATCTCATCTTCGC  
\*\*\*\*\*  
BoOR-LTR ATGCTTTTGTCCATCGAACATGATCTTAGCTTCTTGGTATGTTGATGGTTCACTGTTGATTGAACACAGGAGTAGTTCGATTCTATCTCGCGAGTAGAATGTAATCTTCTAGGTGT  
GOLDEN-LTR ATGCTTTTGTCCATCGAACATGATCTTAGCTTCTTGGTATGTTGATGGTTCACTGTTGATTGAACACAGGAGTAGTTCGATTCTATCTCGCGAGTAGAATGTAATCTTCTAGGTGT  
\*\*\*\*\*  
BoOR-LTR TGGGAAGTTTACTTCTCTAGATGATCTTCTGGTTGACGTGATCTACCTCGGGGGTTGGCTCTGTTGTTCTTCTTGTGTTGAGTCTCAGTTGCAATATTTCTTCTGATGTGAAC  
GOLDEN-LTR TGGGAAGTTTACTTCTCTAGATGATCTTCTGGTTGACGTGATCTACCTCGGGGGTTGGCTCTGTTGTTCTTCTTGTGTTGAGTCTCAGTTGCAATATTTCTTCTGATGTGAAC  
\*\*\*\*\*  
BoOR-LTR CTATGACAAAACGGACCGTTACCTCGTCTATGCTTGTATCCCAAGTCAATGGAAGTTCGACAGATTCTTCTGGTTTCCCTTATCTGTTTCATTCCAGTTCCAGCATGCTTTCTCATCGA  
GOLDEN-LTR CTATGACAAAACGGACCGTTACCTCGTCTATGCTTGTATCCCAAGTCAATGGAAGTTCGACAGATTCTTCTGGTTTCCCTTATCTGTTTCATTCCAGTTCCAGCATGCTTTCTCATCGA  
\*\*\*\*\*  
BoOR-LTR ACTTCACGTCTCGACTAACCACAATCCTTCTCGTCTAGGATTATATAAGCGGTAAGCTTTTCGACCTGGTCTATACCAAGGTGAACAGTGTCTGTGATCTGTCATCGAGTTCTTCA  
GOLDEN-LTR ACTTCACGTCTCGACTAACCACAATCCTTCTCGTCTAGGATTATATAAGCGGTAAGCTTTTCGACCTGGTCTATACCAAGGTGAACAGTGTCTGTGATCTGTCATCGAGTTCTTCA  
\*\*\*\*\*  
BoOR-LTR AAAGGGCAGCATCGAGTTTGGCATATGCCAAACAGCCAAAGACTCTGATGTGCCAATGCTCGGCTTCTTCCCTTGAACCTCTATAAGGAGTTGATTCTTCAAAGCTCTAGTTGGAA  
GOLDEN-LTR AAAGGGCAGCATCGAGTTTGGCATATGCCAAACAGCCAAAGACTCTGATGTGCCAATGCTCGGCTTCTTCCCTTGAACCTCTATAAGGAGTTGATTCTTCAAAGCTCTAGTTGGAA  
\*\*\*\*\*



BoOR-LTR	CTCGATTGATCAGATACGTTGCATGTGCAACAGCCTCTCCCCACATATAATTTGGAACATTTCATCGCTTTTAACATACTGGCGGTCATCTCCATTAACGTCGGTTTCTCTTTGACAA
GOLDEN-LTR	CTCGATTGATCAGATACGTTGCATGTGCAACAGCCTCTCCCCACATATAATTTGGAACATTTCATCGCTTTTAACATACTGGCGGTCATCTCCATTAACGTCGGTTTCTCTTTGACAA
	*****
BoOR-LTR	CGCGGTTTTCGCTGGCGTATATGGCGCAGTTAGATGTCCTCTAATACCATTTGTTGTGCAGTAATCTTGAAGTCTCTTGAAGTAAACTCTCCGCTCTATCTGTGGGAAGTTTACTA
GOLDEN-LTR	CGCGGTTTTCGCTGGCGTATATGGCGCAGTTAGATGTCCTCTAATACCATTTGTTGTGCAGTAATCTTGAAGTCTCTTGAAGTAAACTCTCCGCTCTATCTGTGGGAAGTTTACTA
	*****
BoOR-LTR	TTACTTTATGACCTCCTTCTCTACAAGAGCTTTAAAGGTCCTGAATTTCTCAAAAGACTTCACCTTTTCTTTGAGTAAAAAGACACATGTATCTGTGTGTCATCAATATGACAA
GOLDEN-LTR	TTACTTTATGACCTCCTTCTCTACAAGAGCTTTAAAGGTCCTGAATTTCTCAAAAGACTTCACCTTTTCTTTGAGTAAAAAGACACATGTATCTGTGTGTCATCAATATGACAA
	*****
BoOR-LTR	ATATGTACCGGTTCTGTGCCAGTGTGAAGGAGAGATTGGACCGCAGAGGTCAGCGTGCACAACACTCTAATACCTGCGACGACCTATGTGGTGTGACAGAGGAAAACTATTTCGAGTCT
GOLDEN-LTR	ATATGTACCGGTTCTGTGCCAGTGTGAAGGAGAGATTGGACCGCAGAGGTCAGCGTGCACAACACTCTAATACCTGCGACGACCTATGTGGTGTGACAGAGGAAAACTATTTCGAGTCT
	*****
BoOR-LTR	GTTTCCCAACGAGACAGACTCACAAAGCTTCTTCTCTCGTTGATCTCAGGTAGTCTCGAACCATCTCGAGTTTGGCATGTCTTTATCGTCTTGAAGTTGATATGGCAAGGCGTG
GOLDEN-LTR	GTTTCCCAACGAGACAGACTCACAAAGCTTCTTCTCTCGTTGATCTCAGGTAGTCTCGAACCATCTCGAGTTTGGCATGTCTTTATCGTCTTGAAGTTGATATGGCAAGGCGTG
	*****
BoOR-LTR	CGTGCCATCTCCACGGTTCTTCATTAATCTTTGTGGAAGGCAGCTTGGTTTCCAACCTTTGAGTGATACCTTGTAGAGACGATTAGGTGATCTTAAGACTTTTACAAGTAACCTCCGCG
GOLDEN-LTR	CGTGCCATCTCCACGGTTCTTCATTAATCTTTGTGGAAGGCAGCTTGGTTTCCAACCTTTGAGTGATACCTTGTAGAGACGATTAGGTGATCTTAAGACTTTTACAAGTAACCTCCGCG
	*****
BoOR-LTR	TTGGATCTCTCAAAAGTCAGATAGTTATCTTTCATTCTTACATCACAGCCTTGTTCAGTGTCTTGGCTAGGCTCAGAATGTTGCTTCTTAACCTGGTATATAATATATATTAGTTAGAA
GOLDEN-LTR	TTGGATCTCTCAAAAGTCAGATAGTTATCTTTCATTCTTACATCACAGCCTTGTTCAGTGTCTTGGCTAGGCTCAGAATGTTGCTTCTTAACCTGGTATATAATATATATTAGTTAGAA
	*****
BoOR-LTR	GCTTTTGCCTCCCGTCTTTGCTTCAAGATAATTGAGCCTTTGCCATTGATTTTACACATGATCCATCACCAAACCTTAACCTTCCCTTGATCTTCAATTGAGTTCGGAGAAGAGC
GOLDEN-LTR	GCTTTTGCCTCCCGTCTTTGCTTCAAGATAATTGAGCCTTTGCCATTGATTTTACACATGATCCATCACCAAACCTTAACCTTCCCTTGATCTTCAATTGAGTTCGGAGAAGAGC
	*****
BoOR-LTR	TCTTGTCTCCTGTCATATGATTACTAGCACCGTTGTCAAGATACCAATTACCATCATCAGTTTGTGTTTGCTCAAGTTCTTTGGCATCAGCCTTCTTCATTCAAAAACACACCTTCAT
GOLDEN-LTR	TCTTGTCTCCTGTCATATGATTACTAGCACCGTTGTCAAGATACCAATTACCATCATCAGTTTGTGTTTGCTCAAGTTCTTTGGCATCAGCCTTCTTCATTCAAAAACACACCTTCAT
	*****
BoOR-LTR	GCATGTATAATGCTGCTTCAGTACTTCTGTCTCTGCTTTGTTGAGTTGATGATCATATTCTCTCGGGACAGACAGGCAAGTGACCTTCTTGTGGCAGTGAAGACACTCGAATT
GOLDEN-LTR	GCATGTATAATGCTGCTTCAGTACTTCTGTCTCTGCTTTGTTGAGTTGATGATCATATTCTCTCGGGACAGACAGGCAAGTGACCTTCTTGTGGCAGTGAAGACACTCGAATT
	*****
BoOR-LTR	GAGAGTAATCCTCTTCTCTTATTCTCTCACCTCCGTTGCTACTACCAGCGCCCTTCTCTGTGCCACGACCCCTATTGGAACCTCGTCTCTGCGCTTTGGTCCATGATCGGAGT
GOLDEN-LTR	GAGAGTAATCCTCTTCTCTTATTCTCTCACCTCCGTTGCTACTACCAGCGCCCTTCTCTGTGCCACGACCCCTATTGGAACCTCGTCTCTGCGCTTTGGTCCATGATCGGAGT
	*****
BoOR-LTR	AGAGGAGCTTGCATTATCTTCAAGTTTCTCTCTCGCAATCTCTCTTCTCCACGCAAGCGTTCTCAAATGCTTTGAGGCGACCTACCACATCTTCGTACCTTGTGTTGTTAGGTCAA
GOLDEN-LTR	AGAGGAGCTTGCATTATCTTCAAGTTTCTCTCTCGCAATCTCTCTTCTCCACGCAAGCGTTCTCAAATGCTTTGAGGCGACCTACCACATCTTCGTACCTTGTGTTGTTAGGTCAA
	*****
BoOR-LTR	GAACCTGTCTAGTGTGCTGAGAGCTGAAGAAATTACTTGGCAGACATGATAGAACTTCTTACTAGTTTGTCTTCTCTATCGTATGGCCGAGTGATGCAACTGTTCCTGCAAACT
GOLDEN-LTR	GAACCTGTCTAGTGTGCTGAGAGCTGAAGAAATTACTTGGCAGACATGATAGAACTTCTTACTAGTTTGTCTTCTCTATCGTATGGCCGAGTGATGCAACTGTTCCTGCAAACT
	*****
BoOR-LTR	CTGATAATTTTCGGGAGAGCTATCTATCGAATCAGTATCTTTCAATTCTCAGATGATCGA
GOLDEN-LTR	CTGATAATTTTCGGGAGAGCTATCTATCGAATCAGTATCTTTCAATTCTCAGATGATCGA-----ACTCAATCATCAGTGTGTCAGGCGTGCTTCTATTACTCGATCA
	*****
BoOR-LTR	GCTCCAATATTCAATGCTTTCATGCTTCCACATACCTTTAGGAGAGTCTTGCTCCCAACTTGTAGGATTAAGTTCTCTGGAATTCTTGAACAAGAAATCGTAGCTAGGTCATTCT
GOLDEN-LTR	GCTCCAATATTCAATGCTTTCATGCTTCCACATACCTTTAGGAGAGTCTTGCTCCCAACTTGTAGGATTAAGTTCTCTGGAATTCTTGAACAAGAAATCGTAGCTAGGTCATTCT
	*****
BoOR-LTR	TTCTTTTGGTCTTTGATCTGGATCAATGGTTTCCCATACCTCATGAAACCTAAATAGAACCTTCATCCTTAAAGACCAGACAGCATAGTTCGTTGTTGTGAGCATTTGGTGTGTTGACA
GOLDEN-LTR	TTCTTTTGGTCTTTGATCTGGATCAATGGTTTCCCATACCTCATGAAACCTAAATAGAACCTTCATCCTTAAAGACCAGACAGCATAGTTCGTTGTTGTGAGCATTTGGTGTGTTGACA
	*****
BoOR-LTR	GAGGGTGGTAACGCGCTTAGCTTCATAGCTGGTTTGTCTCTGAATCACTCATGATTAGATTAACCTCATGCTCTGATACCAAATAAAGTCGAGAATCCGAACCTTGGTAT
GOLDEN-LTR	GAGGGTGGTAACGCGCTTAGCTTCATAGCTGGTTTGTCTCTGAATCACTCATGATTAGATTAACCTCATGCTCTGATACCAAATAAAGTCGAGAATCCGAACCTTGGTAT
	*****
BoOR-LTR	ACACAAACTTAATAAACTTTTGTCTTATTAATCTTTCTAGCTTTCTCTCTTTTCTTATTAAAACTCTCTTACACTTAGGCTTCTATATAGGCAATAGAAATCTTAAC
GOLDEN-LTR	ACACAAACTTAATAAACTTTTGTCTTATTAATCTTTCTAGCTTTCTCTCTTTTCTTATTAAAACTCTCTTACACTTAGGCTTCTATATAGGCAATAGAAATCTTAAC
	*****
BoOR-LTR	TTATCCTATTACATATTAATCTAGGAATCTTAACTTAGCTTATCTTTATCCTAAATCTATTGTATAAGTTATTCCTCTTTTCTTTTGAATAACTTATTACTCAAGTAACCTTGAAGC
GOLDEN-LTR	TTATCCTATTACATATTAATCTAGGAATCTTAACTTAGCTTATCTTTATCCTAAATCTATTGTATAAGTTATTCCTCTTTTCTTTTGAATAACTTATTACTCAAGTAACCTTGAAGC
	*****
BoOR-LTR	TTATCC
GOLDEN-LTR	TTATCC
	*****

**Figure S5. *BoOR*-LTR and *BrGOLDEN*-LTR sequence comparison.** Red letters indicate different sites.

**BoOR** ATGTCTTGTTGGGTAGGATCTTGTCGTGTTCTACCCACCGGATCC**GTAC**GGTTCGGCTCTTTCAGTGTCAAAGCTGTCTTACCAGGGAGAAACCGAAGGCTGAGATGGCGTTTCACG  
**GOLDEN<sub>In</sub>** ATGTCTTGTTGGGTAGGATCTTGTCGTGTTCTACCCACCGGATCC**TTCC**GGTTCGGCTCTTTCAGTGTCAAAGCTGTCTTACCAGGGAGAAACCGAAGGCTGAGATGGCGTTTCACG  
**GOLDEN<sub>Del</sub>** ATGTCTTGTTGGGTAGGATCTTGTCGTGTTCTACCCACCGGATCC**TTCC**GGTTCGGCTCTTTCAGTGTCAAAGCTGTCTTACCAGGGAGAAACCGAAGGCTGAGATGGCGTTTCACG  
**GOLDEN<sub>Ldel</sub>** ATGTCTTGTTGGGTAGGATCTTGTCGTGTTCTACCCACCGGATCC**TTCC**GGTTCGGCTCTTTCAGTGTCAAAGCTGTCTTACCAGGGAGAAACCGAAGGCTGAGATGGCGTTTCACG  
 \*\*\*\*\*

**BoOR** GCCTTGGACTCAGACTCTTCTCCCTCGATTCTGATTCTCCGACAAATTCGCTGCCGGCTTTGTATCATAGAAGGACCTGAAACAGTACAGGACTTTGCCAAATGCAATTACAAGAG  
**GOLDEN<sub>In</sub>** GCCTTGGACTCAGACTCTTCTCCCTCGATTCTGATTCTCCGACAAATTCGCTGCCGGCTTTGTATCATAGAAGGACCTGAAACAGTACAGGACTTTGCCAAATGCAATTACAAGAG  
**GOLDEN<sub>Del</sub>** GCCTTGGACTCAGACTCTTCTCCCTCGATTCTGATTCTCCGACAAATTCGCTGCCGGCTTTGTATCATAGAAGGACCTGAAACAGTACAGGACTTTGCCAAATGCAATTACAAGAG  
**GOLDEN<sub>Ldel</sub>** GCCTTGGACTCAGACTCTTCTCCCTCGATTCTGATTCTCCGACAAATTCGCTGCCGGCTTTGTATCATAGAAGGACCTGAAACAGTACAGGACTTTGCCAAATGCAATTACAAGAG  
 \*\*\*\*\*

**BoOR** ATTCAAGACAACATTAGAAGCCGTCGAAACAAGATCTTCTTGCACATGGAAGAGGTACGGAGGCTAAGAATACAACAACGGATTAGAAACACAGAGCTTGGAAATCATAGACGAAGAGCAA  
**GOLDEN<sub>In</sub>** ATTCAAGACAACATTAGAAGCCGTCGAAACAAGATCTTCTTGCACATGGAAGAGGTACGGAGGCTAAGAATACAACAACGGATTAGAAACACAGAGCTTGGAAATCATAGACGAAGAGCAA  
**GOLDEN<sub>Del</sub>** ATTCAAGACAACATTAGAAGCCGTCGAAACAAGATCTTCTTGCACATGGAAGAGGTACGGAGGCTAAGAATACAACAACGGATTAGAAACACAGAGCTTGGAAATCATAGACGAAGAGCAA  
**GOLDEN<sub>Ldel</sub>** ATTCAAGACAACATTAGAAGCCGTCGAAACAAGATCTTCTTGCACATGGAAGAGGTACGGAGGCTAAGAATACAACAACGGATTAGAAACACAGAGCTTGGAAATCATAGACGAAGAGCAA  
 \*\*\*\*\*

**BoOR** GAACACGAATA-----CCTAACTTCCCCTCCTTATCCCATTTCTTACCTCCATTGACTGCTGCCAATTGAGAGTCTATTACGCA  
**GOLDEN<sub>In</sub>** GAACACGAATAAGTCGCAGAATCCGAACCTTGCTTATCCAACACGAATACCTAACTTCCCCTCCTTATCCCATTTCTTACCTCCATTGACTGCTGCCAATTGAGAGTCTATTACGCA  
**GOLDEN<sub>Del</sub>** GAACACGAATAAGTCGCAGAATCCGAACCTTG-----ACTGCTGCCAATTGAGAGTCTATTACGCA  
**GOLDEN<sub>Ldel</sub>** GAACACGAATAAGTCGCAGAATCCGAACCTTG-----  
 \*\*\*\*\*

**BoOR** ACTTGCTTCTCACTATTGCTGGGATTATCCTCTTCGGTGGCTACTAGCTCCTACTCTAGAGCTGAAGCTAGGTATAGGGGGCACATCATATAAAGATTTCAATCAAAGCCTTCATCTA  
**GOLDEN<sub>In</sub>** ACTTGCTTCTCACTATTGCTGGGATTATCCTCTTCGGTGGCTACTAGCTCCTACTCTAGAGCTGAAGCTAGGTATAGGGGGCACATCATATAAAGATTTCAATCAAAGCCTTCATCTA  
**GOLDEN<sub>Del</sub>** ACTTGCTTCTCACTATTGCTGGGATTATCCTCTTCGGTGGCTACTAGCTCCTACTCTAGAGCTGAAGCTAGGTATAGGGGGCACATCATATAAAGATTTCAATCAAAGCCTTCATCTA  
**GOLDEN<sub>Ldel</sub>** -----CTAGAGCTGAAGCTAGGTATAGGGGGCACATCATATAAAGATTTCAATCAAAGCCTTCATCTA  
 \*\*\*\*\*

**BoOR** CCTATGCAATTGAGTCAAGTAGACCCAATAGTGGCGTCATTCTCTGGAGGAGCTGTTGGTGTGATCTCAGCTTTGATGGTAGTTGAAGTTAACAACGTGAAGCAGCAAGAGCACAAGAGA  
**GOLDEN<sub>In</sub>** CCTATGCAATTGAGTCAAGTAGACCCAATAGTGGCGTCATTCTCTGGAGGAGCTGTTGGTGTGATCTCAGCTTTGATGGTAGTTGAAGTTAACAACGTGAAGCAGCAAGAGCACAAGAGA  
**GOLDEN<sub>Del</sub>** CCTATGCAATTGAGTCAAGTAGACCCAATAGTGGCGTCATTCTCTGGAGGAGCTGTTGGTGTGATCTCAGCTTTGATGGTAGTTGAAGTTAACAACGTGAAGCAGCAAGAGCACAAGAGA  
**GOLDEN<sub>Ldel</sub>** CCTATGCAATTGAGTCAAGTAGACCCAATAGTGGCGTCATTCTCTGGAGGAGCTGTTGGTGTGATCTCAGCTTTGATGGTAGTTGAAGTTAACAACGTGAAGCAGCAAGAGCACAAGAGA  
 \*\*\*\*\*

**BoOR** TGCAAACTACTGTCTAGGAAGTGGGTATCTAGCATGTGCCGTTGCTCTAGCACAGGTTCTCTTATTATATCTGAACAGTCTCAGCTATTGCTGGAGGGAACCATCTGTATCAACATCC  
**GOLDEN<sub>In</sub>** TGCAAACTACTGTCTAGGAAGTGGGTATCTAGCATGTGCCGTTGCTCTAGCACAGGTTCTCTTATTATATCTGAACAGTCTCAGCTATTGCTGGAGGGAACCATCTGTATCAACATCC  
**GOLDEN<sub>Del</sub>** TGCAAACTACTGTCTAGGAAGTGGGTATCTAGCATGTGCCGTTGCTCTAGCACAGGTTCTCTTATTATATCTGAACAGTCTCAGCTATTGCTGGAGGGAACCATCTGTATCAACATCC  
**GOLDEN<sub>Ldel</sub>** TGCAAACTACTGTCTAGGAAGTGGGTATCTAGCATGTGCCGTTGCTCTAGCACAGGTTCTCTTATTATATCTGAACAGTCTCAGCTATTGCTGGAGGGAACCATCTGTATCAACATCC  
 \*\*\*\*\*

**BoOR** AAAACCGAAAGATGTTCAAACGTGTTCTGGTGCTGGAAAGGTGATGTGTCCGACATGTCTGTGCACAGGA**ATGG**CTATGGCTAGCGAGCAGCACCCCTCGTATTGATCCCTTCCTTTGA  
**GOLDEN<sub>In</sub>** AAAACCGAAAGATGTTCAAACGTGTTCTGGTGCTGGAAAGGTGATGTGTCCGACATGTCTGTGCACAGGA**ATGG**CTATGGCTAGCGAGCAGCACCCCTCGTATTGATCCCTTCCTTTGA  
**GOLDEN<sub>Del</sub>** AAAACCGAAAGATGTTCAAACGTGTTCTGGTGCTGGAAAGGTGATGTGTCCGACATGTCTGTGCACAGGA**ATGG**CTATGGCTAGCGAGCAGCACCCCTCGTATTGATCCCTTCCTTTGA  
**GOLDEN<sub>Ldel</sub>** AAAACCGAAAGATGTTCAAACGTGTTCTGGTGCTGGAAAGGTGATGTGTCCGACATGTCTGTGCACAGGA**ATGG**CTATGGCTAGCGAGCAGCACCCCTCGTATTGATCCCTTCCTTTGA  
 \*\*\*\*\*

**Figure S6. Three transcripts of the *BrGOLDEN* and open reading frames of *BoOR* sequence comparison. Red letters indicated different sites.**



**Figure S7. RT-PCR detection of specific regulatory elements.** M: Marker 500 bp; The specific expressions of primers *Bractin* (lanes 1 and 2), *CaMV* 35S promoter (lanes 3 and 4), *FMV* 35S promoter (lanes 5 and 6), *NOS* promoter (lanes 7 and 8), *NOS* terminator (lanes 9 and 10) and *CaMV* 35S terminator (lanes 11 and 12) were detected in the ‘1900264’ and ‘1900262’ lines.