

Text S1: Primer sequences of PCR and *CgloRPCYG*, *Hyg*, and *Bar* genes sequences. The sequence of sgRNA was as follows: *CgloRPCYG* sgRNA02: 5'-AACCACCTGACGATGCTTGT-3'. The underlined sequence of 150 bp length is the deletion sequence of $\Delta CgloRPCYG-1$ by CRISPR/Cas 9 knockout. Other primers with different highlighted colors are shown in Table S1.

Table S1 Primers used for PCR and PCR products expected length						
Primer name	Sequence (5'-3')	Expected length /bp				
		W	EV	CEV	KO	CKO
<i>CgloRPCYG</i> -F	ATGGAAGCCGCCGTCCTCG	792	792	792	0	684
<i>CgloRPCYG</i> -R	TTACCACGCCATCAGGCTC					
<i>Hyg</i> -F	GCAGACAGGAACGAGGAC	0	1194	not detection	1194	not detection
<i>Hyg</i> -R	GGTCGGCATCTACTCTATTC					
<i>Bar</i> -F	TCAATCTCGGTGACGGGCA	0	0	552	0	552
<i>Bar</i> -R	ATGAGCCCAGAACGACGC					
<i>CgloRPCYG</i> -D-F	TGTCTCCCGTTTCTTGACTC	656	656	not detection	506	not detection
<i>CgloRPCYG</i> -D-R	AGCAAAGGTGAAGCCACT					

>*CgloRPCYG* DNA sequence

TGTCTCCCGTTTCTTGACTCTTTCTTGTGCGCCGCTTGGTCTTTTCTGCGTTTCTGCAAGT
 CATTCTTTGATCAACTGCCTTCCACTCTTTTAAAGTTTAAACCAGCGACGATCAGCTCG
 ACCATCGATATCATCACTCGACTTCCGCTCGTTTAAACCCGCAAAACCTAATAACCTAA
 AAAACCAAAAACCTCATTACAAATGGAAGCCGCCGTCCTCGCAACCCCGACCGTGCC
 CGTGTCGCCCATGACGATCACCCCGATCCCGACCGCGGCGGTCTCGAGCTCCGCGA
 CAAGCAGGTGCGCTCTCAGACGACCTTACCCCGCCCGCTCACTGCACCGAGAAC
 CACCTGACGATGCTTGTTCGGCGCTGGAGAAGATCTGGATCAACGAGCCTGTGCCC
 CTTCCTCAACTCGACCATCACATCATGCTACCCTACGGAATGGGTCAACGGATACTCCT
 CCGTCATGTCAAAGTCCAGCTCCATGGCACCCGTCATGAGCCCTCTGGTCTGCCCCAG
 CGGATGGAACACTGTTAGCAGCACCTGGTCAAGCGGCTACATCGCCTGCTGCGCTGA
 GTACGTTTGATCTCGTTCCTGAGTATCGATTGGAACACGCATGCTAATAAACTGAAAT
 CAGTGGCTTACCTTTGCTGCTCCTACCAAGACCGCCGACCGCGACCGTCTGCTAC
 GGCGGAACCTGCTACAGCAACTTCGACCTCAGCCAGACCGCCACCGTCACCGTCTAC
 AACCCCGTCGAGCTCTCCACCACCATTGCATGGGTGCGGACTACGACTCCAGCCAG
 GCCTACAACCATCCCATCGAAGGTTTCGCCATGGACTACACACCGACAACATCGGCT
 GCCACGGCTCAAGAGTCAAGCGCCGGCACCCAGAAGTCCGACGAGAAGTCCGCGCC
 GAGGTCAAGCGGCAACTCCAAGGCGGCCATCGTCATTGGAGTCTGCTCGCGAGCCT
 GATGGCGTGGTAAATTGCCCCGACCTTGATGAGCGGCCAGCCAAGATGTTACGA

>*CgloRPCYG* ORF sequence

ATGGAAGCCGCCGTCCTCGCAACCCCGACCGTGCCCGTGTGCGCCATGACGATCACC
 CCGATTCCGACCGCGGCGGTCTCGAGCTCCGCGACAAGCAGAACCACCTGACGATG
 CTTGTGCGCGCGCTGGAGAAGATCTGGATCAACGAGCCTGTGCCCCTTCCCAACTCG
 ACCATCACATCATGCTACCCTACGGAATGGGTCAACGGATACTCCTCCGTCATGTCAA
 AGTCCAGCTCCATGGCACCCGTCATGAGCCCTCTCGTCTGCCCCAGCGGATGGAACA
 CTGTTAGCAGCACCTGGTCAAGCGGCTACATCGCCTGCTGCGCTGATGGCTTACCTT
 TGCTGCTCCACCAAGACCGCCGACCGCGACCGTCTGCTACGGCGGAACCTGCTA
 CAGCAACTTCGATCTCAGCCAGACCGCCACCGTCACCGTCTACAACCCCGTCGAGCT
 CTCCACCACCATCGCATGGGTGCGGACTACGACCCAGCCCAGGCCTACAACCATCC

CATCGAAGGTTTCGCCATGGACTACACACCGACAACATCGGCTGCCACGGCTCAAGA
GTCCAGCGCCGGCACCCAGAACTCCGACGAGAACTCCGCGCCGAGGTCAGGCGGCA
ACTCCAAGGCGGCTATCGTCATTGGAGTCCTGCTCG**CGAGCCTGATGGCGTGTTAA**

>Hyg sequence

AGCTCGGTACCCGGGGATCCTCTAGAGTCGACGTTAACTGATATTGAAGGAGCATTTT
TTGGGCTTGGCTGGAGCTAGTGGAGGTCAACAATGAATGCCTATTTTGGTTTAGTCGT
CCAGGCGGTGAGCACAAAATTTGTGTCGTTTGACAAGATGGTTCATTTAGGCAACTG
GTCAGATCAGCCCCACTTGTAGCAGTAGCGGCGGCGCTCGAAGTGTGACTCTTATTAG
CAGACAGGAACGAGGACATTATTATCATCTGCTGCTTGGTGCACGATAACTTGGTGC
GTTTGTCAAGCAAGGTAAGTGGACGACCCGGTCATACCTTCTTAAGTTCGCCCTTCCT
CCCTTTATTTTCAAGTTCATCTGACTTACCTATTCTACCCAAGCATCCAAATGAAAAA
GCCTGAACTCACCGCGACGTCTGTCGAGAAGTTTCTGATCGAAAAGTTCGACAGCGT
CTCCGACCTGATGCAGCTCTCGGAGGGCGAAGAATCTCGTGCTTTCAGCTTCGATGTA
GGAGGGCGTGATATGTCCTGCGGGTAAATAGCTGCGCCGATGGTTTCTACAAAGAT
CGTTATGTTTATCGGCACTTTGCATCGGCCGCGCTCCCGATTCCGGAAGTGCTTGACA
TTGGGGAGTTCAGCGAGAGCCTGACCTATTGCATCTCCCGCCGTGCACAGGGTGTCA
CGTTGCAAGACCTGCCTGAAACCGAACTGCCCCGTGTTCTCCAGCCGGTTCGCGGAGG
CCATGGATGCGATCGCTGCGGCCGATCTTAGCCAGACGAGCGGGTTCGGCCCATTCG
GACCGCAAGGAATCGGTCAATACACTACATGGCGTGATTTTCATATGCGCGATTGCTG
ATCCCCATGTGTATCACTGGCAAACCTGTGATGGACGACACCGTCAGTGCGTCCGTGCG
GCAGGCTCTCGATGAGCTGATGCTTTGGGCCGAGGACTGCCCCGAAGTCCGGCACCT
CGTGATGCGGATTTTCGGCTCCAACAATGTCTGACGGACAATGGCCGCATAACAGC
GGTCATTGACTGGAGCGAGGCGATGTTTCGGGGATTCCCAATACGAGGTGCCAACAT
CCTCTTCTGGAGGCCGTGGTTGGCTTGTATGGAGCAGCAGACGCGCTACTTCGAGCGG
AGGCATCCGGAGCTTGCAGGATCGCCGCGCCTCCGGGCGTATATGCTCCGCATTGGT
CTTGACCAACTCTATCAGAGCTTGGTTGACGGCAATTTTCGATGATGCAGCTTGGGCGC
AGGGTCGATGCGACGCAATCGTCCGATCCGGAGCCGGGACTGTGCGGCGTACACAA
ATCGCCCGCAGAAGCGCGGCCGTCTGGACCGATGGCTGTGTAGAAGTACTCGCCGAT
AGTGGAACCGACGCCCCAGCACTCGT**CCGAGGGCAAAGGAATAGAG**TAGATGCCG
ACCGGAACCAGTTAACGTCGACCTGCAGGCATGCA

>Bar sequence

ATGAGCCCAGAACGACGCCCGGCCGACATCCGCCGTGCCACCGAGGCGGACATGCC
GGCGGTCTGCACCATCGTCAACCACTACATCGAGACAAGCACGGTCAACTTCCGTAC
CGAGCCGCAGGAACCGCAGGAGTGGACGGACGACCTCGTCCGTCTGCGGGAGCGCT
ATCCCTGGCTCGTCGCCGAGGTGGACGGCGAGGTCGCCGGCATCGCCTACGCGGGCC
CCTGGAAGGCACGCAACGCCTACGACTGGACGGCCGAGTCGACCGTGTACGTCTCCC
CCCGCCACCAGCGGACGGGACTGGGCTCCACGCTCTACACCCACCTGCTGAAGTCCC
TGGAGGCACAGGGCTTCAAGAGCGTGGTCGCTGTCATCGGGCTGCCCAACGACCCGA
GCGTGCGCATGCACGAGGCGCTCGGATATGCCCCCGCGGCATGCTGCGGGCGGCCG
GCTTCAAGCACGGGAACCTGGCATGACGTGGGTTTCTGGCAGCTGGACTTCAGCCTGC
CGGTACCGCCCCGTCCGGTCC**TGCCCCGTACCGAGATCTGA**