

Cmfhp Gene Mediates Fruiting Body Development and Carotenoid Production in *Cordyceps militaris*

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Table S1. Oligonucleotide primer sequences used in this study.

Primer Name	Primer Sequence (5' to 3')	Amplification purpose
KOfhpU-F	GGATCCGCGCGTGTCAATGCTGAC	Primers for amplifying the 5' split-marker fragment (2292 bp)
KOfhpU-R	CCGATGACAGCGACCACGCTCTTG	
KOfhpD-F	CCACTACATCGAGACAAGCACGGTCAACTTC	Primers for amplifying the 3' split-marker fragment (2801 bp)
KOfhpD-R	CGGTGCTTCTCCTATGGGCTTTGATACCATTG	
Bar-F	GCTCGAAGTGTGACTCTTATTAGCAGAC	Primers for amplifying an 890 bp fragment of the <i>bar</i> cassette
Bar-R	GCTTGGACAAATGAACGTATCTTATCGAG	
JCfhp-F	CGAGACCATACGCGCATCTTCTAC	Primers for amplifying an 1196 bp fragment of the <i>Cmfhp</i> gene
JCfhp-R	GCTCGAGGTGAATCTTGTCTCCTCGTT	
JCfhpU-F	GTCGGAGATGCTCTATTCTTATCCACATCT	Primers used to verify the replacement of the upstream end of the <i>Cmfhp</i> gene
JCfhpU-R	CGTTCCTGTCTGCTAATAAAGAGTCACAC	
JCfhpD-F	CCTACAGGACACACATTCATCGTAGGTAT	Primers used to verify the replacement of the downstream end of the <i>Cmfhp</i> gene
JCfhpD-R	GCTGTTAGTTCTGATACCTCTCACAACCTCT	
probe-F	TGCACCATCGTCAACCACTACATC	Primers for amplifying a 433 bp fragment of the <i>bar</i> gene. The 433 bp fragment was used to prepare the <i>bar</i> probe
probe-R	GCTGCCAGAAACCCACGTCAT	
<i>tefl</i> -F	GTCAAGGAAATCCGTCGTGGTAA	Primers for detecting the <i>tefl</i> gene expression
<i>tefl</i> -R	GCAGGCGATGTGAGCAGTGTG	
Qfhp-F	CCTTTGCTATCCATGCTCGAC	Primers for detecting the <i>Cmfhp</i> gene expression
Qfhp-R	CGACGTTGCTAAGGAAGACC	
CmfhpC-F	GCCTCAACACGACGTACACGGTGTG	Primers for amplifying the entire <i>Cmfhp</i> gene
CmfhpC-R	GCAACGAACACACCAAACGGTTCTTCGTAT	
JCBen-F	GGTGCTGCTTCTGTTACGTCGTCAT	Primers for amplifying a 754 bp fragment of the <i>ben</i> gene
JCBen-R	GTCTCGTCGGAGTTCTCAACGAGCTGAT	

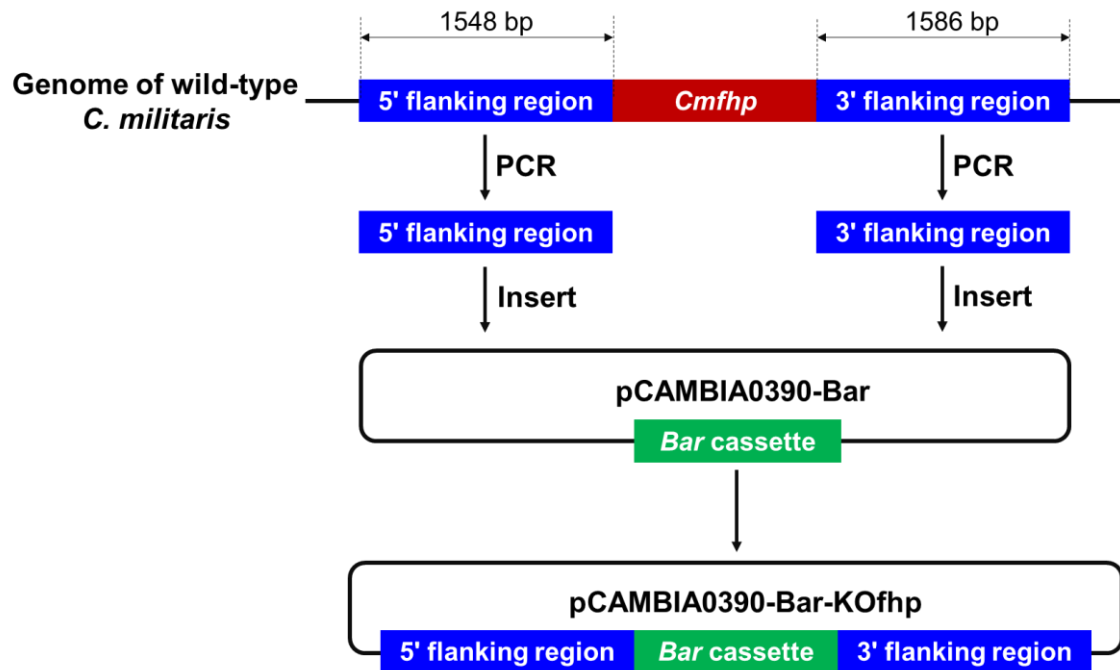


Figure S1. Construction of the vector pCAMBIA0390-Bar-KOfhp. The *bar* cassette contains a phosphinothricin acetyltransferase gene (*bar*) under the control of *Aspergillus nidulans trpC* promoter and *trpC* terminator.

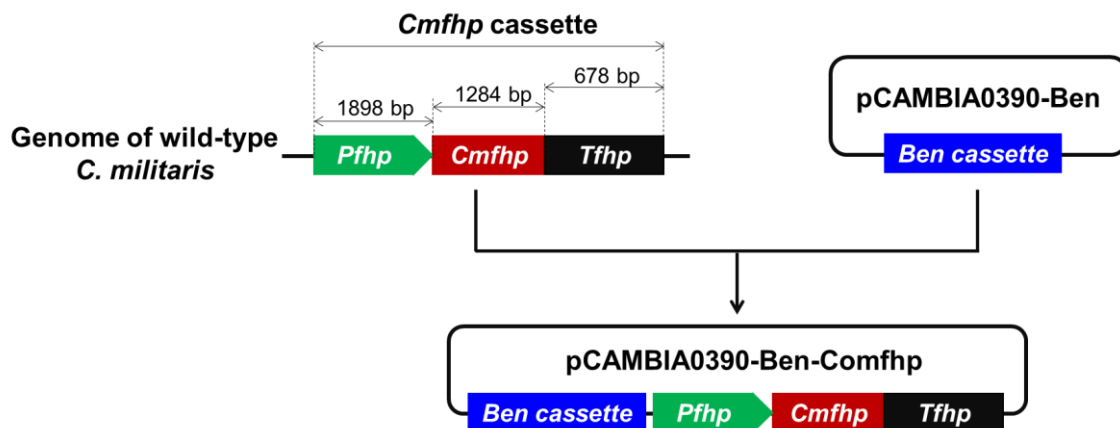


Figure S2. Construction of the vector pCAMBIA0390-Ben-Comfhp. *P fhp*, promoter of the *Cm fhp* gene; *T fhp*, terminator of the *Cm fhp* gene. The *ben* cassette contains the benomyl resistant gene (*ben*), the promoter *P ben*, and the terminator *T ben*.

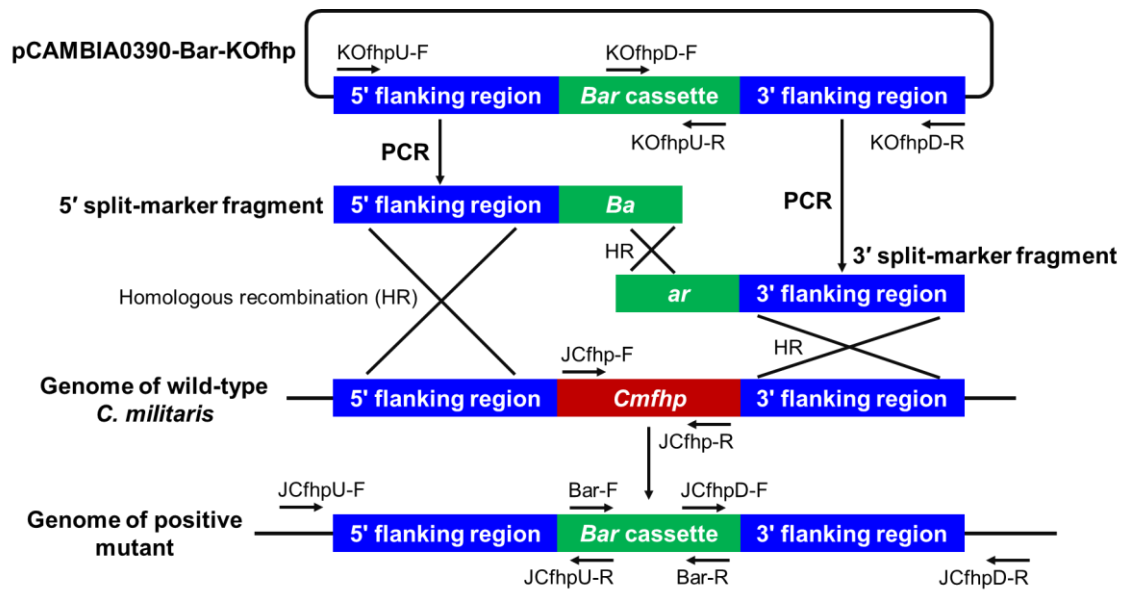


Figure S3. Schematic diagram for preparing split-marker fragments and deletion of the *Cmfp* gene.