Supporting Information

The Sesquiterpene Synthase from the Botrydial Biosynthetic Gene Cluster of the Phytopathogen *Botrytis cinerea*

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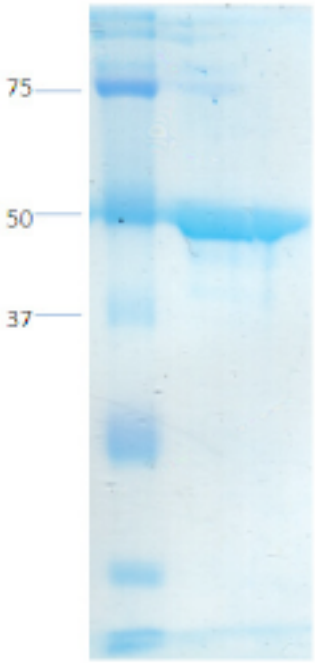
Supplementary Table 1. Primers used in quantitative RT-PCR

Gene	Forward primer	Sequence 5′>3′	Reverse primer	Sequence 5′>3′	Size (bp)
BcBOT4	BD1	GGGAACCGAGGTCAATGTCA	BD13	GCTTGAATTCCCAGGGATCTG	77
BcBOT5	BD28	CACGAACTGGACAAAGGCTAAA	BD29	ACCACCCGCAATCAAAGC	70
BcBOT3[a]	BD12	CTAAGGGCTCGCGGAGTTG	BD24	GCATTGCGCTGGCAAGA	69
BcBOT2[b]	BD5	CAGGTTATCCCTTTGCATGAGTAGT	BD17	TTACACTGGTGAATGATGTTTTGTCTT	95
BcBOT1[c]	BD8	GGCTCCCGTGCTTGCA	BD20	GCGAGGTGAAGAAGTTAGAGAAGGT	76
EF1B	BcEF1b-F	GCTGCCAAGTCTGTTGTCACA	BcEF1b-R	CAATGCTACCATGTCGGTCTCA	66

[a]Formerly *CND11*. [b]Formerly *CND15*. [c]Formerly *CND5*.

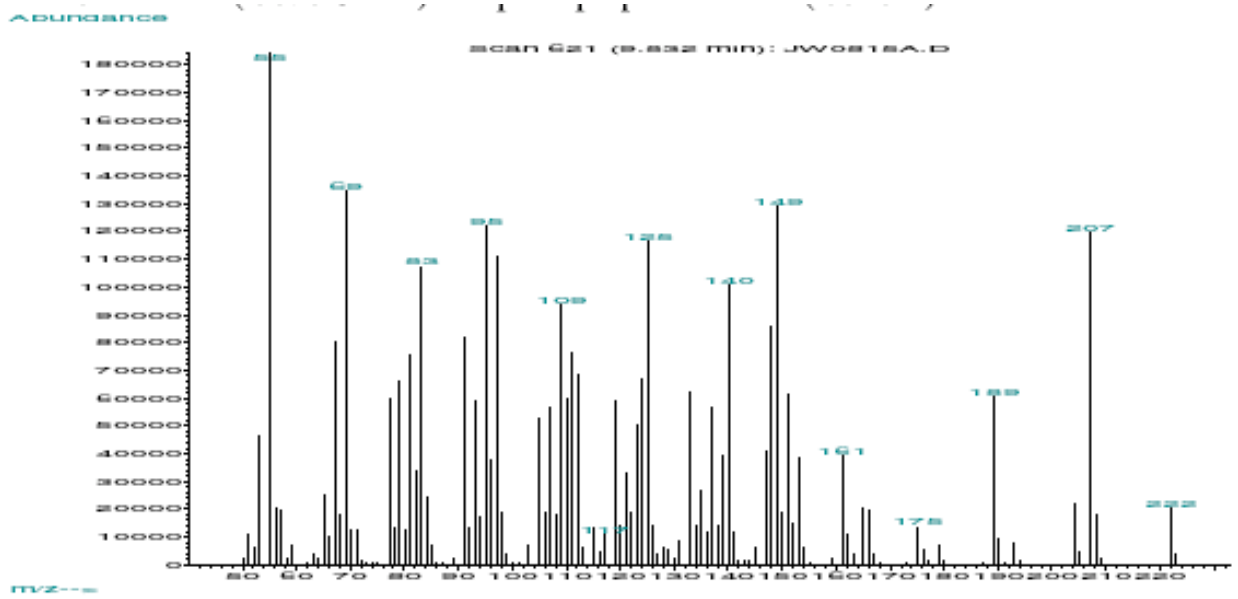
Supplementary Table 2. Primers used for gene inactivation

Primer	Sequence 5′>3′ (restriction sites indicated in bold)
Cyc1	GAA GCG TGC CTA GCA CTT GT
Cyc2	TGA TCA TCC TGG AGG GAT TC
CycA-seam	AGT TA**C TCT TC**A CAC GCG ATC AGC CTT AGC GAG TA
CycB-seam	AGT TA**C TCT TC**A TGG GTC CGG AAC ACG AAC GAA TG
Bar-seam-up	TTA **CTC TTC** ACC ACC TGA ATG GCG AAT GGA AAT
Bar-seam-low	TTA **CTC TTC** AGT GCA CGG AAA TGT TGA ATA CTC
Nat1-F-NN	GCG GCC G**CC CAT GG**G AAC TCT CTA GAG CCG C
Nat1-R-SS	ACT AGT **CCG CGG** AAT TCC TGC AGG CCG CTC
Cyc5	GGC CAG GTA TCT TGG ACA GA
Bar547	CAT GCGCAC GCT CGG GTC GTT

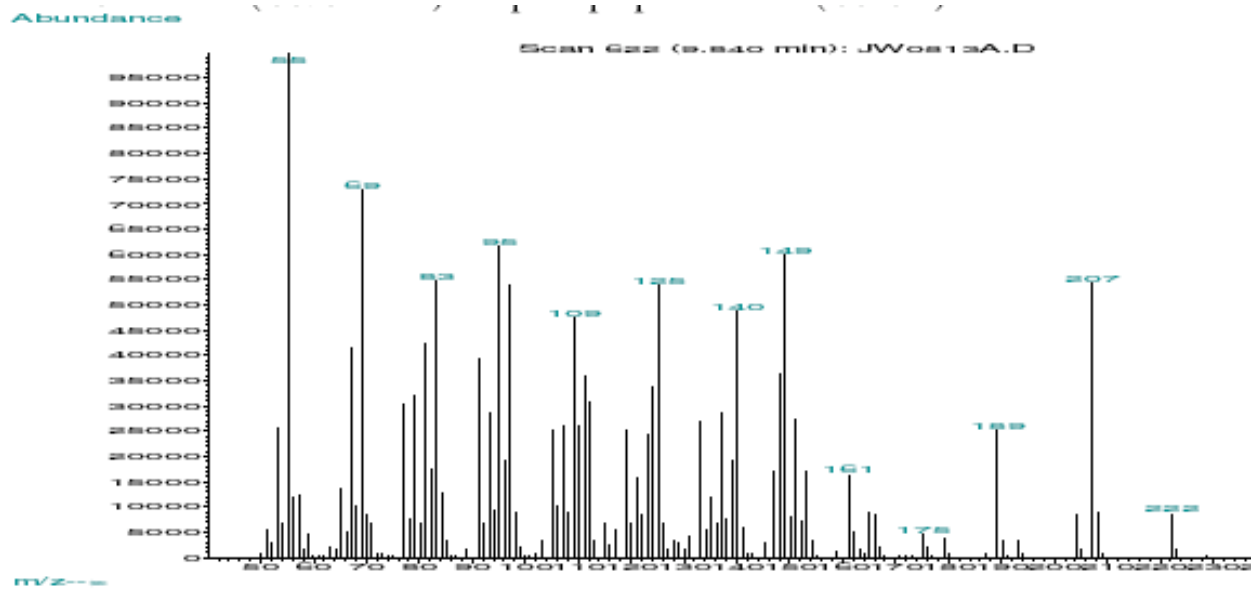


Supplementary Figure 1. SDS-PAGE Analysis. Left lane, molecular weight markers. Right lane, recombinant His_6tag-BcBOT2 protein

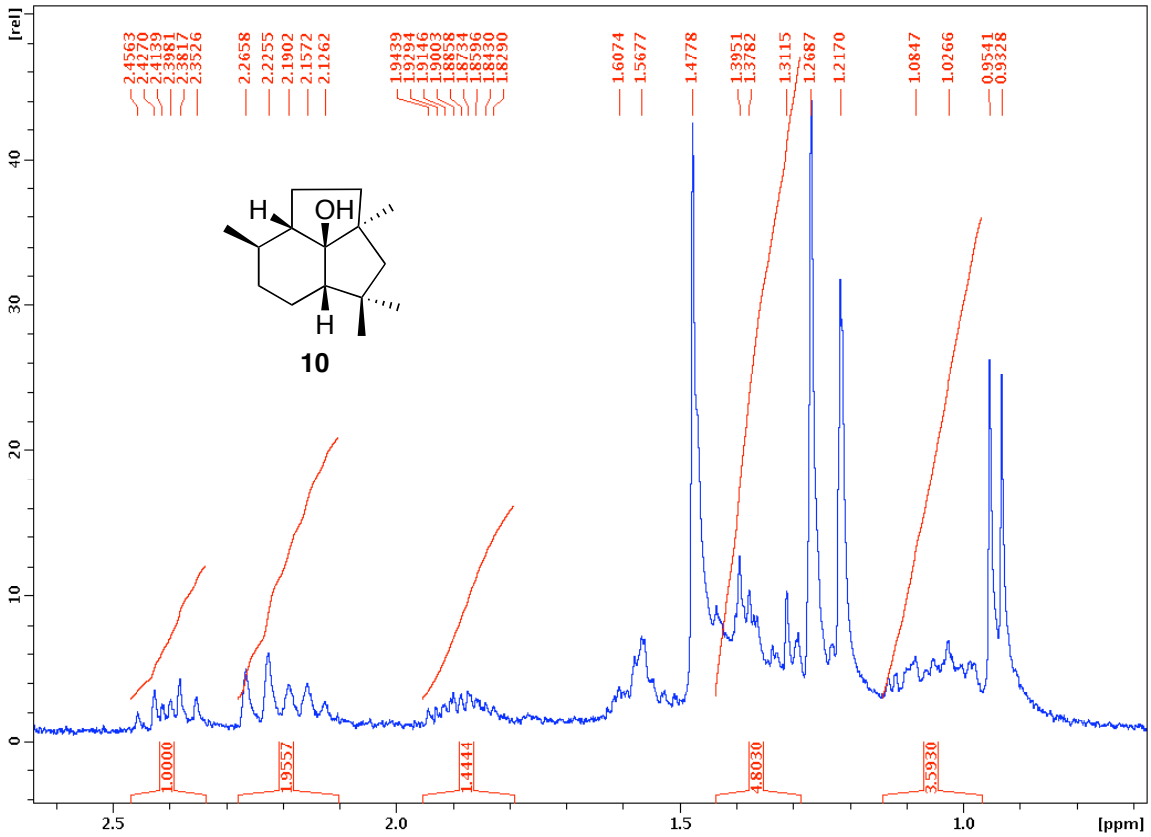
a



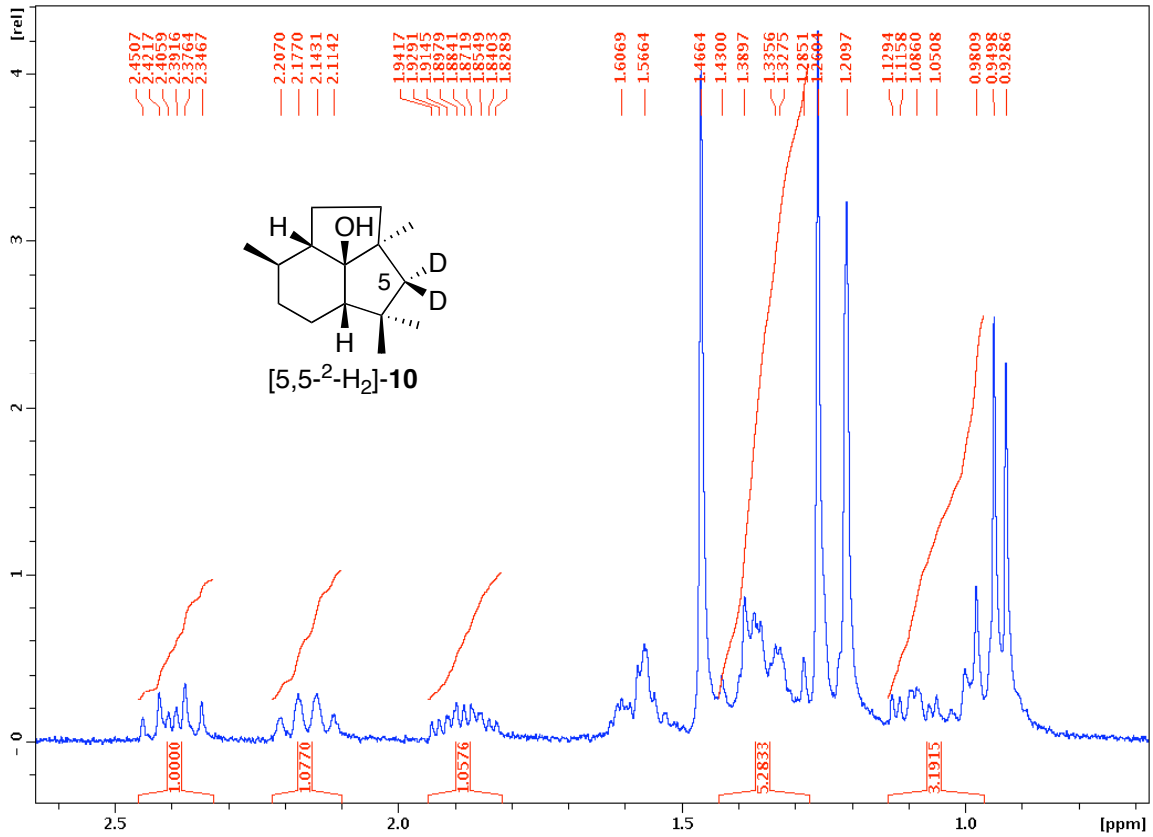
b



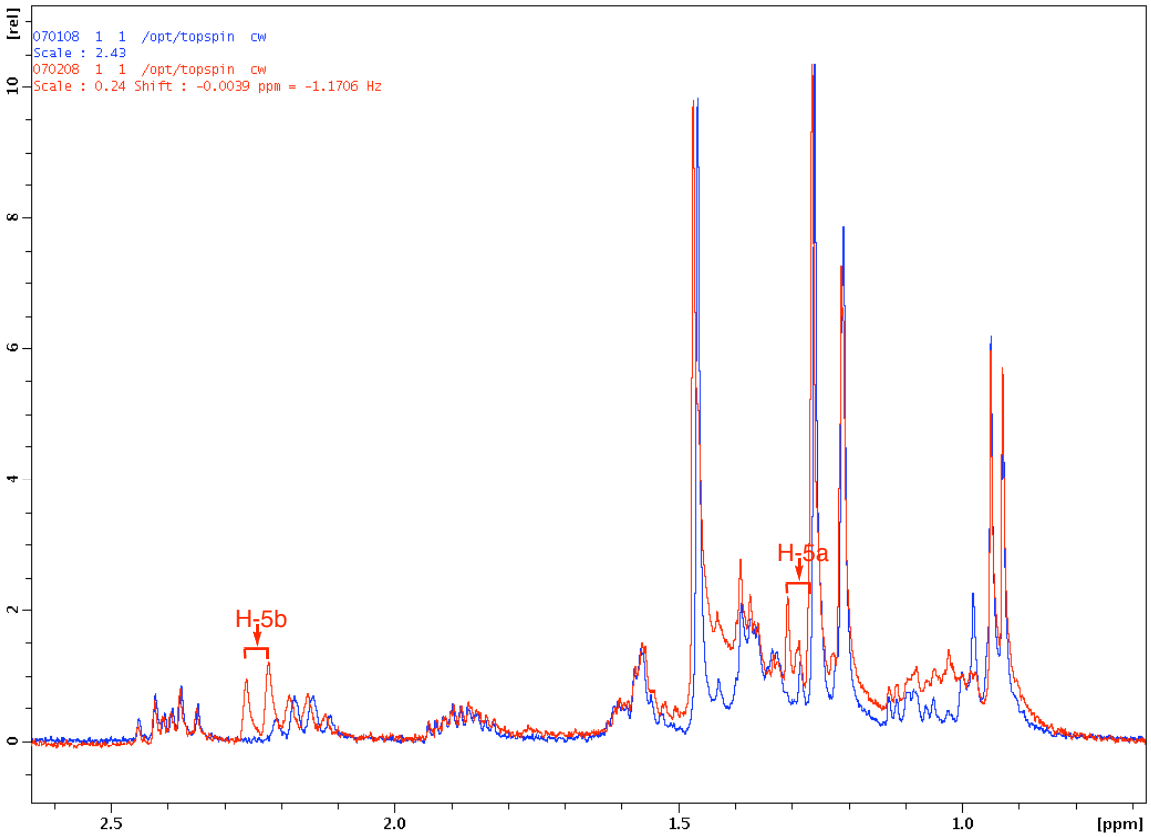
Supplementary Figure 2. GC-MS analysis of the enzymatic cyclization of FPP by BcBOT2 protein. A. MS of authentic presilphiperfolan-8-ol (**10**). B. MS of presilphiperfolan-8-ol (**10**) from incubation of FPP (60 μM) with BcBOT2 protein (1 μM) at 30 °C for 1 h.



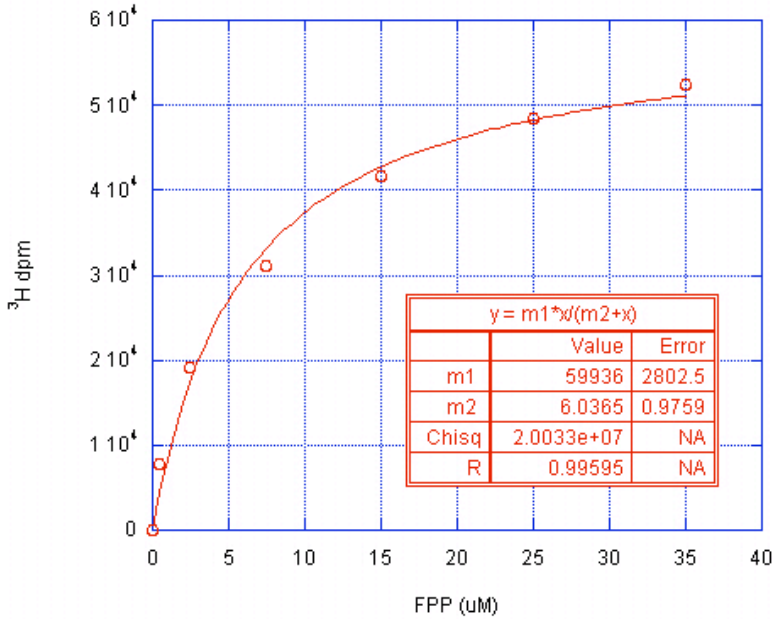
Supplementary Figure 3. ^{1}H NMR (C_6D_6, 300 MHz) spectrum of the enzymatically generated presilphiperfolan-8-ol (**10**) from the incubation of FPP (60 μM) with BcBOT2 protein (1 μM) at 30 °C for 2 h.



Supplementary Figure 4. ^{1}H NMR (C_6D_6, 300 MHz) spectrum of the enzymatically generated [5,5-$^{2}H_2$]-presilphiperfolan-8-ol (**10**) from the incubation of [1,1-$^{2}H_2$]-FPP (60 μM) with BcBOT2 protein (1 μM) at 30 °C for 2 h.



Supplementary Figure 5. Superposition of ^{1}H NMR spectra of **10** (red) and [5,5-$^{2}H_2$]-**10** (blue).



Supplementary Figure 6. Michaelis-Menten plot of the reaction velocity of the formation of presilphiperfolan-8β-ol (**10**) as a function of the concentration of FPP.