Supporting information

Appendix A. Generation of Δ*PoElp3* strain. (A) Strategy for the mutagenesis of *PoElp3*. The A and B fragments of PoElp3 were fused with N and C fragments of hygromycin phosphotransferase (*HPH*) genes respectively to form the 'A-H' and 'H-B' fragments that were used to replace the ORF of *PoElp3*. (B) Total genomic DNA samples (10 μg/sample) isolated from Guy11, *PoElp3* deletion mutants were digested with *Pst* I and subjected to Southern blot analysis using the 'A' fragment of *PoElp3* to generate the probe (Table S3). A 7.4 kb target band was present in all of the Δ*Poelp3* strains and a 3.4 kb target band was presented only in the Guy11 wild-type. (C) PCR and (D) qRT-PCR based genotyping of the complemented strains. The asterisks indicate statistically significant difference (***: $p < 0.001$). Data were shown as the mean±SE (*n=3*).

Appendix B. Primers used in this study.

Appendix C. Elp3 is conserved among different eukaryotic organisms. Sequence alignment of PoElp3 with its homologs from *Neurospora crassa* (XP_961595.1), *F. graminearum* (FGSG_02040.3), *B. cinerea* (XP_001555701.1), Elp3p in *S. cerevisiae* (EGA84564.1), *Oryza sativa* (XP_015635801.1) and *Homo sapiens* (NP_060561.3). The FeS/SAM binding sites of radical S-adenosylmethionine (SAM) domain were highlight in orange.

The conserved A-, B- and D- motifs of histone acetyltransferase (HAT) domain were underlined.

Appendix D. Statistical analysis of different types of invasive hyphae (IHs). (A) The 4 types of IHs: type1, no hyphal penetration with only appressoria formation; type 2, IH without branch; type 3, IH with branches; type 4, IH extended to neighboring cell. Bar = 20 μm. (B) Statistical analysis of different types of IHs in wild-type, Δ*Poelp3* strain and the complemented strain.

Appendix E. Ectopic expression of *GFP-PoELP3* could rescue the defects in vegetative growth of Δ*Poelp3* strain. Colony morphology (A) and colony diameters (B) of Guy11, Δ*Poelp3* and the *GFP-PoELP3* ectopic expression strain (Δ*Poelp3*/*GFP-PoELP3*) on complete medium (CM). The asterisks indicate statistically significant difference (***: $p < 0.001$). Data were shown as the mean±SE (*n=3*).

Appendix F. The Δ*Poelp3* strain was more sensitive to rapamycin treatment than Guy11 wild-type. (A) Colony morphology of Guy11, Δ*Poelp3* and Δ*Poelp3c* grown on CM and MM-N treated with or without 1 μg mL^{-1} rapamycin (Rap). (B) Inhibition rate of Guy11, Δ*Poelp3* and Δ*Poelp3c* grown on CM and MM-N treated with 1 μg mL^{-1} rapamycin (Rap). The asterisks indicate statistically significant differences (**: $p < 0.01$; ***: $p < 0.001$). Data were shown as the mean±SE (*n=3*).

Appendix G. The acetylation of histone 3 at Lysine 14 was reduced in Δ*Poelp3* strain. (A) Acetylation of Histone 3 at Lysine 14 in hyphal cells grown in liquid CM medium for 72 h were harvested. Immunoblotting assay was performed using antibodies against H3K14ac and Actin respectively. (B) Quantification of the α-H3K14ac/α-Actin ratio. Similar results were obtained in 3 independent biological repetitions.