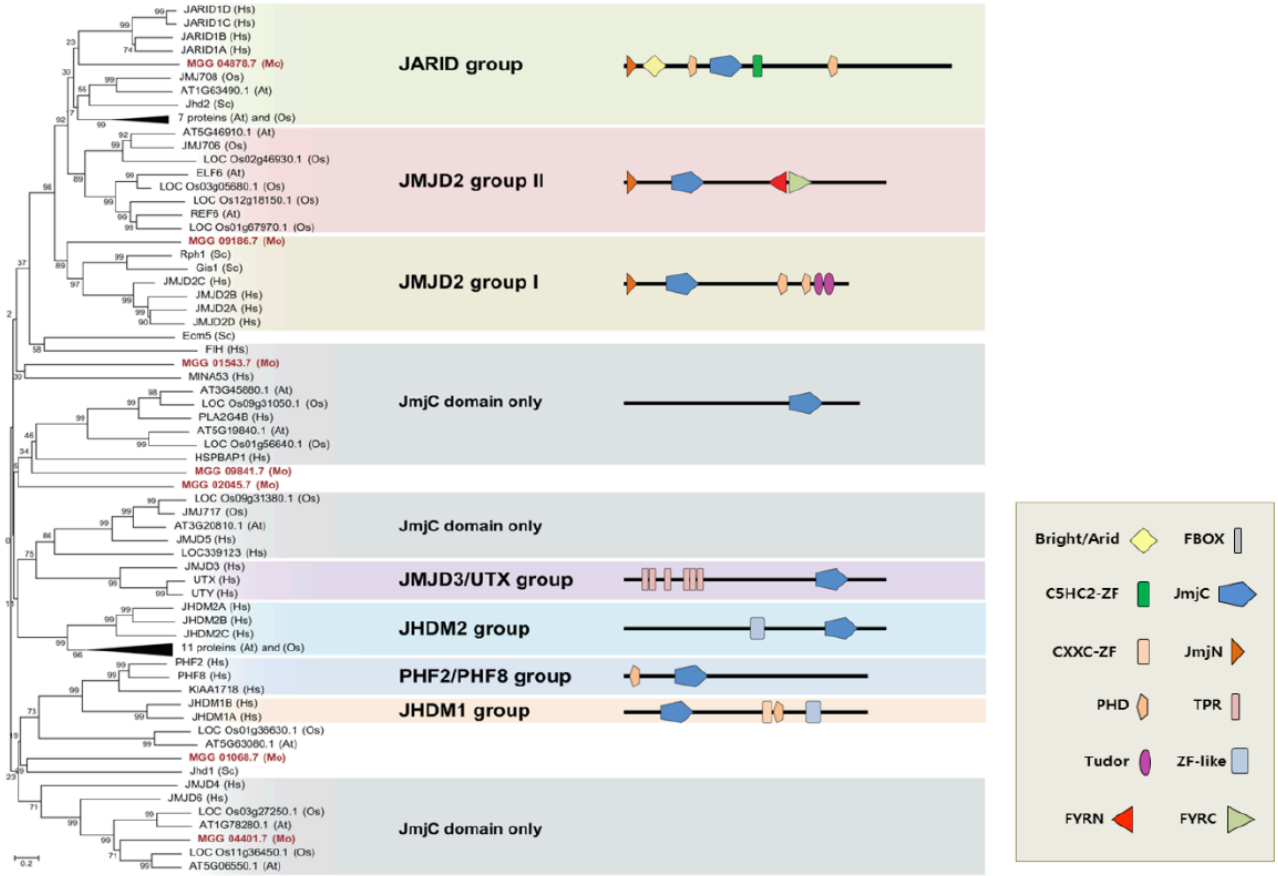

Fig. S1. Phylogenetic analysis of MoJMJ1. Protein sequences of JmjC demethylase from human, Arabidopsis, rice and yeast were taken from NCBI. Alignment was carried out using ClustalW algorithm within MEGA 5.2 program, and phylogenetic tree was generated by neighbor-joining method. Histone demethylases in *M. oryzae* was shown in red. Abbreviation for species: Hs, *Homo sapiens*; At, *Arabidopsis thaliana*; Os, *Oryza sativa*; Sc, *Saccharomyces cerevisiae*; Mo, *Magnaporthe oryzae*.

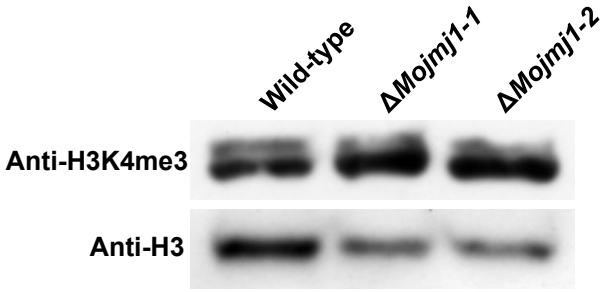

Fig. S2. Western blot analysis of H3K4me3 in wild-type and deletion mutants.

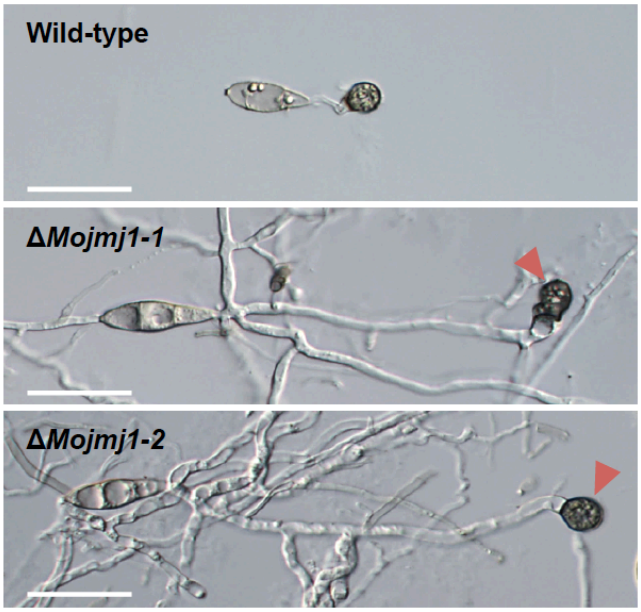

Fig. S3. Abnormal appressorium formation of Δ*Mojmj1*. Appressorium formation of wild-type and Δ*Mojmj1* mutants was observed at 36 hours after drop on hydrophobic coverslips. Arrows indicate appressorium. Scale bars = 30 μm.

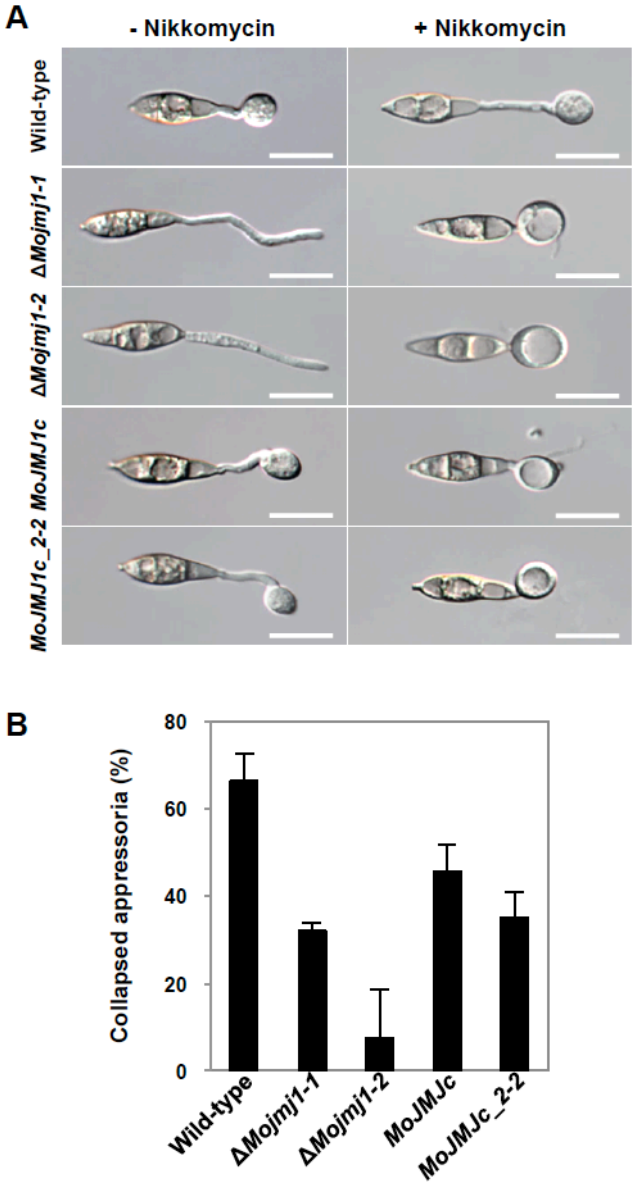

Fig. S4. Cell wall defect of Δ*Mojmj1* and *MoJMJ1*c. (A) Nikkomycin Z sensitivity test. Conidial suspensions were treated with 100 µM Nikkomycin Z on hydrophobic surface after 2.5 hours incubation. Scale bars = 20 µm. (B) Cytorrhysis assay. Conidial suspensions were incubated 48 hours on hydrophobic surface and then treated with 3M of glycerol solution. A proportion of collapsed appressoria was observed under the microscope at 30 minute after the glycerol treatment.