Figure S1: Plasmid map of pRW2h + HH01::GFP construct used for this study.
**Figure S2: The size of the compartments varies.** Number of compartments of the size indicated. Calculations were based on 65 hyphae from 5 biological replicates.

**Figure S3: In young germlings only the apical nucleus is active.** Time-lapse sequence of mitosis in an 10-hours old germling. Asterisk indicates nucleus that will undergo mitosis, arrowhead indicates newly formed septum. Scale bar 10 µm.
Figure S4: Hoechst 33342 DNA staining of 2-day old hyphae of Fol4287 grown on PDA plates. a) Fast growing hypha harboring 3 nuclei in the apical compartment. Left bright field, right DAPI channel. b) Intercalary compartments of a mature hypha showing various numbers of nuclei per compartment. Top bright field, bottom DAPI channel. Asterisks indicate stained nuclei, arrowheads indicate septa. Scale bar 10 µm.

Figure S5: Colony phenotype after 2 days on different media. Colonies grown on PDA show more aerial hyphae and a higher level of hyphal density. Scale bar 1 cm.