

**Fig.S1.** Relationship between the bioluminescence and cell concentration. Log-phase cells were sampled, washed with PBS buffer and re-suspended in the same volume of PBS. Cells were mixed with the same volume of NanoLuc Analysis Buffer (Promega) and determined as described in Methods and Materials. Cells numbers were determined by plating serial dilutions of reporter strain SCH733.

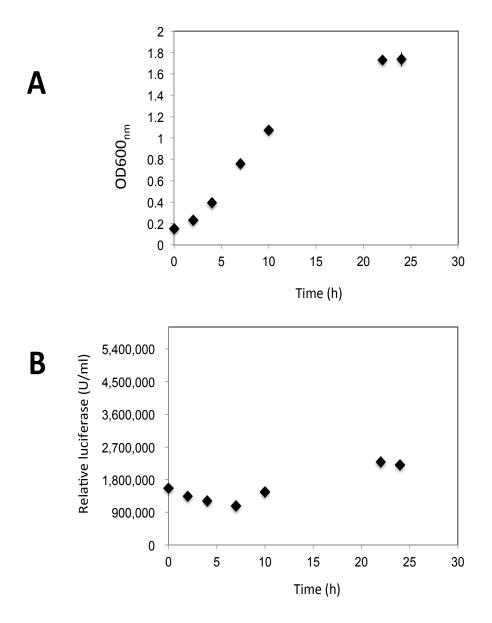


Fig.S2. Growth and NanoLuc production in F. hibernum strain W22. A) Growth curve of reporter strain SCH733 in CYE medium. B) Luciferase production in SCH733. SCH733 cells were cultured in CYE medium supplemented with Em (100  $\mu$ g/ml) by shaking at room temperature. Cells at different growth phase were sampled, washed with PBS buffer and re-suspended in the same volume PBS. Cells were mixed with the same volume of NanoLuc Analysis Buffer (Promega) and determined as described in Methods and Materials. Related luciferase was expressed as the normalization of luciferase activity with OD<sub>600</sub>. Triplicates were performed. Standard deviations were shown as error bars.