Expression of GFP and DsRed in the Homobasidiomycete *Schizophyllum commune*

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Expression of GFP and DsRed was studied in the homobasidiomycete *Schizophyllum commune*. *CGFP* or *sGFP* fused to the *SC3* promoter resulted in similar steady state mRNA levels. These levels were considerably lower than that of *SC3*. Despite the low mRNA levels, both *GFP* variants resulted in fluorescent hyphae. The *sGFP* expressing strains showed stronger fluorescence than the *CGFP* expressers. When *CGFP* was fused to the N-terminal or C-terminal part of the mature SC3 protein, no fluorescence was observed. However, accumulation of *GFP::SC3* mRNA was almost similar to that of endogenous *SC3*. Moreover, secreted proteins of transformants (ΔSC3 background) secreting the N-terminal fusion reacted with an SC3 antiserum. A C-terminal fusion of GFP to the SC15 protein did result in fluorescence. However, the protein was found in the cytoplasm instead of being secreted into the medium. *DsRed2* was successfully expressed behind the *SC3* or *GPD* promoter. Since only a low background fluorescence was observed, DsRed2 is preferred over GFP as a reporter protein.

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