Supplementary information

Cellular localization of GFP fusions of Dss1p, Mlo3p and Uap56p

We determined the cellular localization of Dss1p tagged at the C-terminus with green fluorescent protein (GFP). In the wild type cell, the Dss1p-GFP fusion localized to the nucleus, the nuclear rim and in the cytoplasm (Figure 1A, panel a and inset). These results suggest that, in addition to the nucleus and the cytoplasm, some fraction of Dss1p is stably associated with the nuclear pore. Its localization in the nucleus and cytoplasm suggests that the protein may shuttle between the compartments. A GFP fusion of the Dss1-49p localized similarly to the wild type protein (data not shown). C-terminal GFP fusions of Mlo3p and Uap56p were found to be in the nucleus similar to the cellular localization of their homologs in *S. cerevisiae* and metazoan cells (supplementary Figure 1A, panel b and c).

Protein import and export in *dss1* mutant cells

We used the shuttling behavior of Pap1p-GFP fusion in *dss1-49* and Δ*dss1* strain (not shown). The steady state localization of Pap1p-GFP is in the cytoplasm by its nuclear export via a Rev-like Leptomycin-B sensitive nuclear export signal (NES). In *dss1-49* cell, Pap1p-GFP localized to the cytoplasm (Figure 1B, -LMB). Pap1p-GFP fusion localized to the nucleus after treatment with 1nM Leptomycin-B (+LMB). When the cells were washed extensively to remove the drug and incubated further, the GFP signal relocated to the cytoplasm (Wash; 6hr.). These results demonstrate that Pap1p-GFP could be imported and exported in *dss1-49* cells normally, suggesting that import and export of proteins take place normally in *dss1-49*.

Figure 1. Cellular localization of Dss1p-GFP, Mlo3p-GFP, and Uap56p-GFP in wild type *S. pombe* strain and import and export of a reporter GFP fusion protein in *dss1* mutant strain. (**A**) C-terminal GFP fusion of Dss1p, Mlo3p and Uap56p in wild type cell. Inset of panel a shows nuclear pore localization of Dss1p-GFP. Lower panel, DAPI stained cells. (**B**) Import and export of Pap1p-GFP in *dss1-49* strain. *dss1-49* cells were transformed with a C-terminal GFP fusion of Pap1p and its cellular localization was analyzed without treatment (-LMB), after treating with 1nM Leptomycin-B (+LMB) and after 6hrs. of incubation in media after washing off the drug (Wash; 6hr). Corresponding DAPI stained cells are shown below.