

**Figure S1.** Sis1 does not impair  $[PSI^+]^S$ ; DnaJB6b does not change  $[PSI^+]^S$  prion character. **A** Cells from Figure 3A expressing two copies of Sis1 that show diffuse fluorescence were streaked onto 1/2YPD. All resulting colonies are white with no noticeable red or pink anywhere in the streaks, indicating that all cells giving rise to them propagate  $[PSI^+]^S$  despite their original  $[psi^-]$ -like fluorescence. **B** Cytoduction to infect wild type recipient strain 628-8Cc with prions from red and white cells expressing Sis1 or DnaJB6 (left panel) as indicated. Upper center panel shows plate selecting for 628-8Cc and  $[PSI^+]$  prions (cytoductant recipients only), right panel shows selection for diploids regardless of prion status to confirm that cells mated. Patches of cells labeled yellow "C" use control  $[PSI^+]$  donor strain – its genotype allows selection for cytoductants but not diploids. 628-8Cc cytoductants from plate in center panel were streaked for colonies onto 1/2YPD to monitor prion phenotype. All have the same prion phenotype. Labels identify the donor source of prions.

**Figure S2.**  $[GSPI^+]^S$  prions are not lethal. Plasmid shuffle using strain 2140  $[GSPI^+]^S$ . Cells expressing Sis1JGF only (ev) or Sis1JGF and co-expressing either the ST or STC region of DnaJB6b grow similarly on FOA, indicating ST and STC do not counteract  $[GSPI^+]^S$  toxicity. Both grow much more slowly than those expressing Sis1 or DnaJB6b (JB6), while those expressing Sis1-D36N (Sis1-DN) do not grow on FOA (note no change in cell density from 2 to 4 days on FOA).

**Figure S3.** A Plasmid shuffle selection on FOA shows fluorescent tags do not alter ability of Sis1 and DnaJB6b test proteins to protect cells from prion toxicity (compare with Figure 1B).