



**Supplementary Figure 5. Deletions in *HR* and *SHU* genes suppress the synthetic lethality of *sgs1Δmms4Δ* and *sgs1Δmus81Δ* double deletion mutants.** MAT $\alpha$  double deletion strains harboring the *sgs1Δ::kan* deletion and one of the 24 “nat” deletions, were mated to MAT $\alpha$  strains harboring the *mms4Δ::hygB* deletion (left panel) or the *mus81Δ::hygB* deletion (right panel). ~0.5OD/ml of the resulting diploids were sporulated for 7 days and plated on triple mutant selection media (see Methods). Plates were incubated at 30C for 3 days. High levels of background colony formation may be attributed to the hyper-recombination phenotype of *sgs1Δ* strains. Plates having an above background number of colonies represent rescue of synthetic lethality and are shaded pink.