

**Table S3 Recombination and spore viability between His4-239 and Lys4-95, and Ade6.**

Strains	Genotype	Total germinated	Spores Plated	Mean Viability Relative to WT	Average cM His4 Lys4	Average cM Leu2 Ura2	Average cM His7 Leu1	Average %ade+
1251 x 5107	WT	8940	24600	100.00 %	9.07	—	—	0.40%
5192 x 5205	<i>rad16-249</i>	7158	38600	58.87%	11.03	—	—	0.19%
5268 x 4561	<i>rec12Δ</i>	1041	15600	14.19%	0	—	—	0
5176 x 5180	<i>rec12Δ rad16-249</i>	782	15600	11.35%	0	—	—	0
6917 x 6923	WT	19314	—	—	—	1.84	—	—
6915 x 6924	<i>rad16-249</i>	11409	—	—	—	5.24	—	—
168 x 6919	WT	8011	—	—	—	—	4.75	—
4707 x 6921	<i>rad16-249</i>	5307	—	—	—	—	7.73	—