

# Table S1

## S. cerevisiae spore viability measurements

Genotype	Cross	Background	Tetrads dissected	Mean spore viability	95% confidence interval	Viability pattern				
						4	3	2	1	0
WT	MJ512xMJ513	SK1	64	96.9	2.13	92.19	3.13	4.69	0.00	0.00
WT	MJ600xMJ631	S288c	72	96.9	2.01	88.89	9.72	1.39	0.00	0.00
WT	MJ600xMJ513	SK1xS288c	197	82.0	2.68	53.81	27.41	14.21	2.03	2.54
<i>msh2Δ</i>	MC25xMC26	SK1	110	80.9	3.67	60.00	12.73	18.18	9.09	0.00
<i>msh2Δ</i>	MC49xMC51	S288c	105	77.9	3.97	47.62	26.67	18.10	4.76	2.86
<i>msh2Δ</i>	MC49xMC26	SK1xS288c	149	73.0	3.56	40.27	25.50	21.48	11.41	1.34
<i>ndt80AR 8h</i>	MJ846	SK1	40	94.4	3.57	82.50	12.50	5.00	0.00	0.00
<i>ndt80AR 10h</i>	MJ43xMC42	SK1xS288c	86	70.4	4.83	36.05	25.58	25.58	9.30	3.49
<i>mec1-mn</i>	VG120xVG121	SK1	130	58.5	4.24	21.54	32.31	15.38	20.00	10.77
<i>mec1-mn</i>	MC152xMC153	S288c	110	77.3	3.92	50.00	24.55	17.27	0.91	7.27
<i>mec1-mn</i>	VG120xMC153	SK1xS288c	153	6.4	1.94	1.31	0.65	4.58	9.15	84.31
<i>mec1-nm msh2Δ</i>	MC163xMC164	SK1	88	49.2	5.22	19.32	23.86	14.77	18.18	23.86
<i>mec1-nm msh2Δ</i>	MC171xMC172	S288c	111	63.1	4.49	30.63	25.23	19.82	14.41	9.91
<i>mec1-nm msh2Δ</i>	MC163xMC172	SK1xS288c	176	28.8	3.35	3.41	10.80	17.61	34.09	34.09
<i>mec1-mn ndt80AR 3h</i>	MC2xMC3	SK1	88	49.2	5.22	12.50	28.41	18.18	25.00	15.91
<i>mec1-mn ndt80AR 6h</i>	MC2xMC3	SK1	86	54.1	5.27	19.77	23.26	23.26	20.93	12.79
<i>mec1-mn ndt80AR 8h</i>	MC2xMC3	SK1	84	57.7	5.28	17.86	30.95	25.00	16.67	9.52
<i>mec1-mn ndt80AR 10h</i>	MC2xMC3	SK1	86	48.6	5.28	12.79	19.77	30.23	23.26	13.95
<i>mec1-mn ndt80AR 4h</i>	MC2xMC198	SK1xS288c	64	10.2	3.70	1.56	1.56	3.13	23.44	70.31
<i>mec1-mn ndt80AR 6h</i>	MC2xMC198	SK1xS288c	63	18.3	4.77	0.00	6.35	14.29	25.40	53.97
<i>mec1-mn ndt80AR 8h</i>	MC2xMC198	SK1xS288c	87	16.4	3.89	2.30	4.60	9.20	24.14	59.77
<i>mec1-mn ndt80AR 10h</i>	MC2xMC198	SK1xS288c	63	27.0	5.48	4.76	6.35	19.05	31.75	38.10
<i>rad24Δ</i>	MC17xMC18	SK1	132	21.6	3.51	7.58	5.30	17.42	5.30	64.39
<i>rad24Δ</i>	MC19xMC20	S288c	106	46.7	4.75	12.26	17.92	29.25	25.47	15.09
<i>rad24Δ</i>	MC17xMC20	SK1xS288c	240	0.7	0.54	0.00	0.00	0.00	2.92	97.08
<i>rad24Δ msh2Δ</i>	MC105xMC107	SK1	107	21.6	3.88	7.58	5.30	17.42	5.30	64.39
<i>rad24Δ msh2Δ</i>	MC202xMC203	S288c	102	28.2	4.37	2.94	11.76	18.63	28.43	38.24
<i>rad24Δ msh2Δ</i>	MC105xMC203	SK1xS288c	462	5.9	1.07	1.30	2.38	8.87	21.00	66.45
<i>rad24Δ ndt80AR 4h</i>	MJ835xMC89	SK1xS288c	91	1.9	1.41	0.00	0.00	2.20	3.30	94.51
<i>rad24Δ ndt80AR 6h</i>	MJ835xMC89	SK1xS288c	93	6.7	2.54	0.00	4.30	1.08	11.83	82.80
<i>rad24Δ ndt80AR 8h</i>	MJ835xMC89	SK1xS288c	218	7.9	1.79	0.46	0.92	4.59	17.89	76.15
<i>rad24Δ ndt80AR 10h</i>	MJ835xMC89	SK1xS288c	269	15.9	1.82	1.86	2.60	13.38	17.84	64.31
<i>rad24Δ ndt80AR 4h</i>	MJ848	SK1	44	31.8	6.88	4.55	18.18	20.45	13.64	43.18
<i>rad24Δ ndt80AR 6h</i>	MJ848	SK1	66	42.8	5.97	9.09	15.15	36.36	16.67	22.73
<i>rad24Δ ndt80AR 8h</i>	MJ848	SK1	84	59.2	5.42	15.48	26.19	28.57	25.00	4.76
<i>rad24Δ ndt80AR 10h</i>	MJ848	SK1	59	69.1	5.90	35.59	22.03	28.81	10.17	3.39
<i>rad24Δ smi1Δ</i>	MC101xMC103	SK1	102	41.7	4.78	18.63	13.73	21.57	7.84	38.24
<i>rad24Δ smi1Δ</i>	MC101xMC61	SK1xBY474	196	4.7	1.48	0.51	0.51	4.08	7.14	87.76
<i>mus81Δ</i>	MC214xMC215	SK1	110	55.7	4.64	17.27	27.27	25.45	20.91	9.09
<i>mlh3Δ</i>	MC254xMC255	SK1	110	89.1	2.91	81.82	3.64	9.09	0.00	5.45
<i>mus81Δ mlh3Δ</i>	MC271xMC272	SK1	107	59.6	4.65	26.17	28.04	19.63	10.28	15.89
<i>mec1-mn mus81Δ</i>	MC243xMC242	SK1	108	20.4	3.80	1.85	3.70	14.81	33.33	46.30
<i>mec1-mn mlh3Δ</i>	MC303xMC304	SK1	117	49.6	4.50	22.22	14.53	23.08	19.66	20.51
<i>mec1-mn mus81Δ mlh3Δ</i>	MC333xMC334	SK1	94	21.3	4.10	1.06	8.51	15.96	23.60	51.06
<i>rad24Δ mus81Δ</i>	MC222xMC223	SK1	110	19.3	3.69	0.00	7.27	20.91	13.64	58.18
<i>rad24Δ mus81Δ msh2Δ</i>	MC292xMC297	SK1xS288c	31	0.0	0.00	0.00	0.00	0.00	0.00	100.00
<i>rad24Δ mlh3Δ</i>	MC247xMC248	SK1	109	20.6	3.80	6.42	3.67	13.76	18.35	57.80
<i>rad24Δ mus81Δ mlh3Δ</i>	MC257xMC258	SK1	98	7.9	2.67	1.02	0.00	9.18	9.18	80.61
<i>rad24Δ mus81Δ ndt80AR 4h</i>	MC288xMC289	SK1	89	5.9	2.45	1.12	0.00	4.49	10.11	84.27
<i>rad24Δ mus81Δ ndt80AR 8h</i>	MC288xMC289	SK1	108	9.7	2.79	0.00	1.85	2.78	27.78	67.59
<i>mus81Δ ndt80AR 4h</i>	MC286xMC287	SK1	128	34.0	4.10	6.25	10.94	23.44	31.25	28.13
<i>mus81Δ ndt80AR 8h</i>	MC286xMC287	SK1	110	33.4	4.41	3.64	17.27	21.82	23.64	33.64
<i>zip3Δ</i>	MC322xMC313	SK1xS288c	106	46.2	4.75	13.21	18.87	31.13	13.21	23.58
<i>zip3Δ msh2Δ</i>	MC326xMC317	SK1xS288c	177	35.9	3.53	7.34	12.99	28.25	18.64	32.77