

Gene deletion	Function/pathway of inactivated gene product	DEF (50% survival)	DEF (10% survival)
BY4741 strain background			
<i>pso2</i>	Interstrand cross-link repair	5.9	6.0
<i>pph3</i>	Protein phosphatase	3.2	2.5
<i>ctr1</i>	Copper transporter	2.9	3.0
<i>rad30</i>	Translesion synthesis	2.8	2.6
<i>ump1</i>	Chaperone required for 20S proteasome maturation	2.8	2.4
<i>ptc3</i>	Protein phosphatase	2.7	3.0
<i>ccc2</i>	Copper transporter	2.6	2.0
<i>sml1</i>	Ribonucleotide reductase inhibitor	2.5	2.0
<i>sml1 rad53</i>	Checkpoint kinase (<i>sml1</i> deletion required for viability)	2.5	1.5
WT	Wild type	2.5	1.80
<i>rad59</i>	Homologous recombination, single-strand annealing	2.1	1.9
<i>rad50</i>	MRN/X- repair complex	1.9	1.7
<i>rad24</i>	Checkpoint protein, DNA damage detection	1.9	1.4
<i>ptc2</i>	Protein phosphatase	1.8	1.9
<i>rev3</i>	Translesion synthesis	1.8	1.9
<i>rad10</i>	Nucleotide excision repair	1.7	1.5
<i>rtt101</i>	Ubiquitin-ligase component, promoting replication through damaged DNA	1.6	3.3
<i>psy3</i>	Shu complex component, promoting homologous recombination	1.2	1.1
<i>sgs1</i>	RecQ-like DNA helicase	1.2	1.1
<i>rad18</i>	DNA damage tolerance by template switch(TS) and translesion synthesis	1.2	1.0
<i>rad51</i>	Homologous recombination	1.1	1.2
<i>ubc13</i>	DNA damage tolerance (TS)	1.1	1.0
<i>mms2</i>	DNA damage tolerance (TS)	1.1	1.0
<i>rad5</i>	DNA damage tolerance (TS)	0.9	1.0
YJK17 strain background			
<i>pph3</i>	Protein phosphatase	5.2	4.0
WT	Wild type	4.2	3.0

<i>ptc2 ptc3</i>	Protein phosphatases	4.1	3.8
<i>ptc2 ptc3 pph3</i>	Protein phosphatases	1.9	1.6