Supplemental Table 1. Yeast strains used in study

Strain	Genotype	Source/Comments
W303-1	*MAT***a** *ade2 ura3 leu2 trp1 his3 can1*	***a***
EMY60	*MAT***a** *ade2 ade3 ura3 leu2 trp1 his3 Δlys2:HIS3 can1*	His^- due to *ade3* ***b***
EMY56-5D	*MATα ade2 ura3 leu2 trp1 his3 Δlys2:HIS3 Δtrx1:LYS2 Δtrx2:LEU2 can1*	Met^- ***c***
MY203	*MAT***a**/*MATα ade2/ade2 ura3/ura3 leu2/LEU2:GAL1-LacZ trp1/trp1 his3/his3 LYS2/lys2 TRR1/Δtrr1:HIS3 SWI6/Δswi6:TRP1 MET/met*	***d***
MY218	*MATα ade2 ura3 leu2 trp1 his3 lys2 Δtrr1:HIS3*	MY203 spore
MY243	*MAT***a** *ade2 ura3 leu2 trp1 his3 Δtrr2:URA3*	Gene transplacement
MY276	*MAT***a** *ade2 ura3 leu2 trp1 his3 lys2 Δswi6:TRP1*	***d***
MY284	*MAT***a**/*MATα ade2/ade2 ura3/ura3 leu2/leu2 trp1/trp1 his3/his3 LYS2/lys2 TRR1/Δtrr1:HIS3 TRR2/Δtrr2:URA3*	MY218 x MY243
MY287	*MATα ade2 ura3 leu2 trp1 his3 lys2 Δtrr1:HIS3 Δtrr2:URA3*	MY284 spore, Met ***e***
MY301	*MAT***a** *ade2 ura3 leu2 trp1 his3 Δtrr1:HIS3 bar1*	Met ***e f***
MY320	*MAT***a** *ade2 ura3 leu2 trp1 his3 can1 pRS305- p53 RE-Z:LEU2*	From W303-1
MY321	*MAT***a** *ade2 ura3 leu2 trp1 his3 Δtrr1:HIS3 bar1 pRS305- p53 RE-Z:LEU2*	From MY301
MY324	*MAT***a**/*MATα ade2/ade2 ura3/ura3 leu2/leu2 trp1/trp1 his3/his3 lys2/Δlys2:HIS3 SWI6/Δswi6:TRP1 TRR1/Δtrr1:HIS3 TRX1/Δtrx1:LYS2 TRX2/Δtrx2:LEU2*	MY276 x EMY56-5D
MY325	*MAT***a** *ade2 ura3 leu2 trp1 his3 lys2 Δtrx1:LYS2 Δtrx2:LEU2*	MY324 spore, Met^-
MY327	*MAT***a**/*MATα ade2/ade2 ura3/ura3 leu2/leu2 trp1/trp1 his3/his3 lys2/lys2 TRR1/Δtrr1:HIS3 TRR2/Δtrr2:URA3 TRX1/Δtrx1:LYS2 TRX2/Δtrx2:LEU2*	MY287 x MY325
MY332	*MATα ade2 ura3 leu2 trp1 his3 lys2 Δtrr1:HIS3 Δtrx1:LYS2 Δtrx2:LEU2*	MY327 spore, Met^-
MY339	*MAT***a** *ade2 ura3 leu2 trp1 his3 lys2*	MY324 spore
MY340	*MAT***a**/*MATα ade2/ade2 ura3/ura3 leu2/leu2 trp1/trp1 his3/his3 lys2/lys2 TRR1/Δtrr1:HIS3 TRX1/Δtrx1:LYS2 TRX2/Δtrx2:LEU2*	MY332 x MY339
MY364	*MATα ade2 ura3 leu2 trp1 his3 lys2*	From MY340 tetrad
MY366	*MATα ade2 ura3 leu2 trp1 his3 lys2 Δtrr1:HIS3*	From MY340 tetrad, Met ***e***
MY367	*MAT***a** *ade2 ura3 leu2 trp1 his3 lys2 Δtrx1:LYS2 Δtrx2:LEU2*	From MY340 tetrad, Met^-
MY368	*MAT***a** *ade2 ura3 leu2 trp1 his3 lys2 Δtrx2:LEU2*	From MY340 tetrad
MY369	*MAT***a** *ade2 ura3 leu2 trp1 his3 lys2 Δtrr1:HIS3 Δtrx1:LYS2*	From MY340 tetrad, Met ***e***
MY370	*MATα ade2 ura3 leu2 trp1 his3 lys2 Δtrr1:HIS3 Δtrx1:LYS2 Δtrx2:LEU2*	From MY340 tetrad, Met^-
MY371	*MATα ade2 ura3 leu2 trp1 his3 lys2 Δtrx1:LYS2*	From MY340 tetrad
MY372	*MAT***a** *ade2 ura3 leu2 trp1 his3 lys2 Δtrr1:HIS3 Δtrx2:LEU2*	From MY340 tetrad, Met^-

[a] Wallis, J. W., Chrebet, G., Brodsky, G., Rolfe, M., and Rothstein, R. (1989) *Cell 58,* 409-419.

[b] Muller, E. G. D. (1994) *J. Biol. Chem.* 269**,** 24466-24471.

[c] Muller, E. G. D. (1996) *Molec. Biol. Cell* **7,** 1805-1813.

[d] Machado, A. K., Morgan, B. A., and Merrill, G. M. (1997) *J. Biol. Chem.* 272, 17045-17054.

[e] Grows slowly in the absence of methionine.

[f] Pearson, G. D., and Merrill, G. F. (1998) *J Biol Chem 273*, 5431-5434.

Supplemental Table 2: Oligonucleotide primers used for p53 PCR mutagenesis

p53 allele	Vector (end) primer [a]	Mutagenic primer
C124S	forward	5′-GGAGTACGTGCTAGTCACAGAC-3′
C124S	reverse	5′-TCTGTGACTAGCACGTACTCCC-3′
C135S	forward	5′-GGCCAGTTGGCTAAACATCTTG-3′
C135S	reverse	5′-AACATGTTTAGCCAACTGGCC-3′
C141S	forward	5′-CTGCACAGGGCTGGTCTTGGCC-3′
C141S	reverse	5′-GCCAAGACCAGCCCTGTGCAGC-3′
C176S	forward	5′-ATGGTGGGGGCTGCGCCTCAC-3′
C176S	reverse	5′-GTGAGGCGCAGCCCCCACCAT-3′
C182S	forward	5′-GCTATCTGAGCTGCGCTCATGG-3′
C182S	reverse	5′-CATGAGCGCAGCTCAGATAGC-3′
C229S	forward	5′-GATGGTGGTACTGTCAGAGCC-3′
C229S	reverse	5′-GGCTCTGACAGTACCACCATC-3′
C238S	forward	5′-GGAACTGTTACTCATGTAGTT-3′
C238S	reverse	5′-AACTACATGAGTAACAGTTCC-3′
C242S	forward	5′-GCCGCCCATGCTGGAACTGTT-3′
C242S	reverse	5′-AACAGTTCCAGCATGGGCGGC-3′
C275S	forward	5′-CCCAGGACAGGCACTAACACGCAC-3′
C275S	reverse	5′-GAGGTGCGTGTTAGTGCCTGTCCT-3′
C277S	forward	5′-CGTGTTTGTGCCAGTCCTGGGAGA-3′
C277S	reverse	5′-GTCTCTCCCAGGACTGGCACAAAC-3′
C275S/ C277S	forward	5′-TCTCCCAGGACTGGCACTAACACGCACC-3′
C275S/ C277S	reverse	5′-GTGCGTGTTAGTGCCAGTCCTGGGAGA-3′
C124A	forward	5′-GGAGTACGTGGCAGTCACAGACTTG-3′
C124A	reverse	5′-GTCTGTGACTGCCACGTACTCCCCT-3′
C135A/C141A	forward	5′-CTGCACAGGGGCGGTCTTGGCCAGTTGGGCAAACATCTTGTTG-3′
C135A/C141A	reverse	5′-AAGATGTTTGCCCAACTGGCCAAGACCGCCCCTGTGCAGCTG-3′
C275A	forward	5′-CCCAGGACAGGCAGCAACACGCACCTC-3′
C275A	reverse	5′-GAGGTGCGTGTTGCTGCCTGTCCTGGG-3′

[a] Forward primer, 5′-GTCCTCGAGTTCACCATGGAGGAGCCGCAGTCAGAT-3′; Reverse primer, 5′-TTAGGATCCTCAGTCTGAGTCAGGCCCTTC-3′