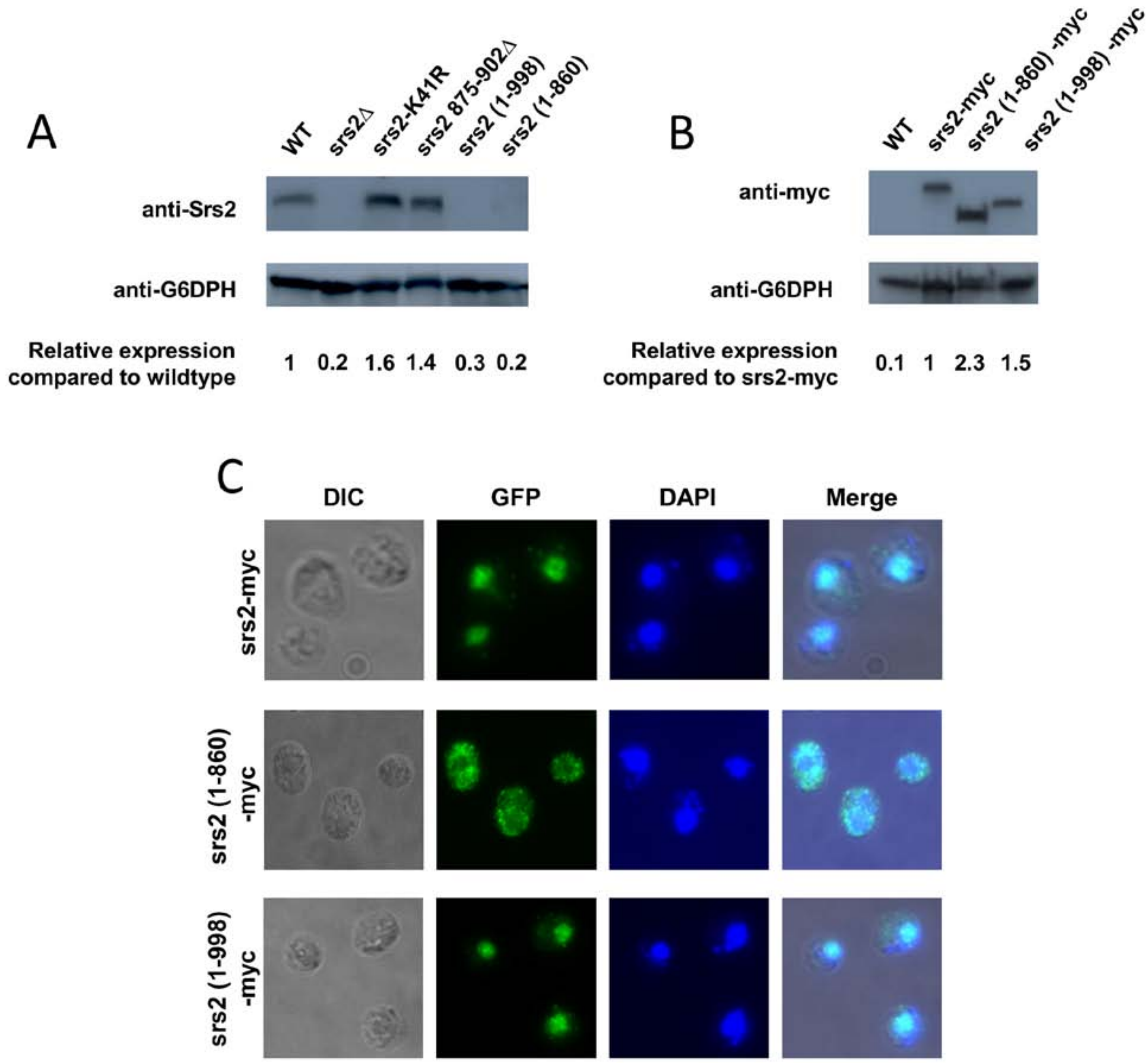
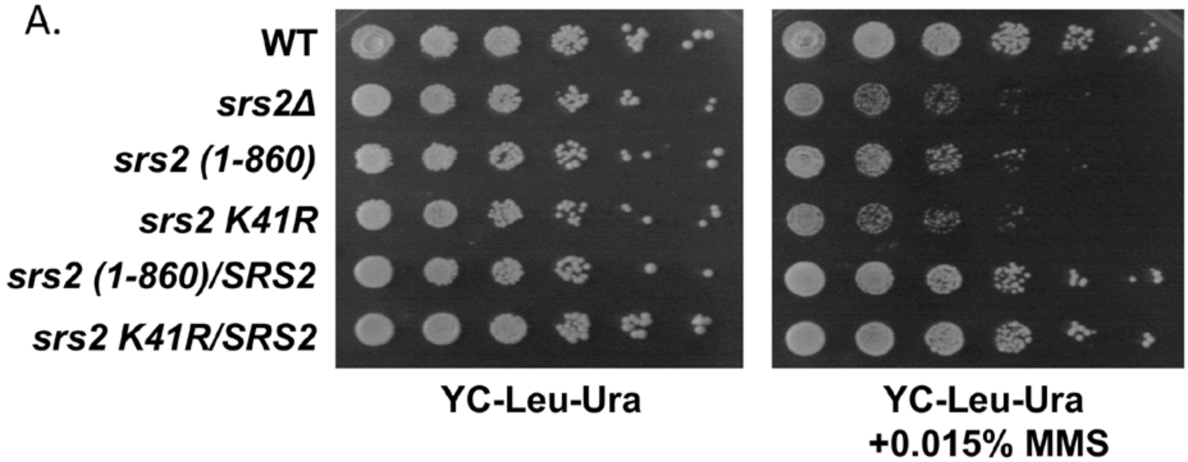


Figure S1. Expression of Srs2 domain mutant proteins. (A) Untagged proteins Srs2, srs2-K41R and srs2 875-902Δ were detected using an antibody to the Srs2 C-terminus. (B) Srs2, srs2 (1-860) and srs2 (1-998) were C-terminally tagged with 13myc and detected using an anti-myc antibody. The relative expression level over either wild-type Srs2 or Srs2-myc after normalization to G6DPH is shown below the blots. (C) Protein localization was detected using a fluorescent anti-myc antibody to the myc tagged proteins. Examples are typical of 50-100 cells that were analyzed for each strain. Note that all proteins used in the experiments in the main manuscript were untagged, the tagged proteins were only used in the experiments shown here to detect protein levels and localization.

A.



B. $(CAG)_{70}$ Instability on YAC in diploid strains

Strain Name	No. colonies analyzed	% Expansions	Fold over wild-type	% Contractions	Fold over wild-type
wild-type	269	1.1	1.0	2.6	1.0
srs2Δ	231	5.6*	5.1*	6.5*	2.5*
srs2 (1-860)	152	5.3*	4.7*	12.5*	4.8*
srs2 (1-860)/SRS2	151	3.3	2.3	2.0	0.8

*p<0.05 compared to wild-type using Fisher's Exact Test

Figure S2. Comparison of MMS sensitivity and $(CAG)_{70}$ repeat instability in haploid and diploid strains. (A) Strains heterozygous for the indicated mutation or the corresponding haploid strains were serially diluted 1:5 and spotted onto plates either lacking or containing 0.015% MMS. (B) Instability of the CAG tract in the *srs2(1-860)/SRS2* diploid strain was analyzed as described in the main text, and compared to the corresponding haploid strains. Expansions, contractions, and MMS sensitivity were all suppressed by the presence of the wild-type SRS2 gene in the diploids.

Supplemental Materials and Methods

Western blot analysis

Proteins were isolated as described in (1) with the following modifications: cells were resuspended in 100uL of 20% TCA prior to disruption and the resulting extract was neutralized with 50uL of 2M Tris Base. Equal volumes of extracts were loaded on 7.5% SDS page gels and semi-dry transferred to PVDF membrane; extracts from 40 OD_{600} of cells were used for the anti-Srs2 blot, 5 OD_{600} for the anti-myc blot. Membranes were blocked with 5% milk+PBST for 1 hour at room temperature before incubation with primary antibody in 1% milk+PBST overnight at 4°C followed by incubation with secondary antibody in 1% milk+PBST for 30 minutes at room temperature. The antibody that recognizes the Srs2 C-terminus (Santa Cruz, sc-11991) was used at 1:200 dilution. Srs2, srs2 (1-860) and srs2 (1-998) were not recognized by the sc-11991 antibody, and thus were C-terminally tagged with 13myc (2). The anti-myc antibody (Life Technologies, 13-2500) was used at 1:5000 dilution. The anti-G6DPH antibody (Sigma, A9521-1VL) was used at 1:10000 dilution. The secondary antibodies used were HRP-conjugated anti-goat (Santa Cruz, sc-2350) used at 1:5000 dilution, HRP-conjugated anti-mouse (Invitrogen, 626520) used at 1:5000 dilution, and HRP-conjugated anti-rabbit (Invitrogen, A24537) used at 1:10000 dilution. Enhanced chemiluminescence (ECL) Western blot substrate (Thermo Scientific, 32106) and Sharp autoradiography film (Denville, E3018) were used to detect protein signal. Quantification was performed in ImageJ. Two replicates were performed.

Immunofluorescence

Early log phase cells grown in YC –Leu-Ura were fixed with 3.7% formaldehyde. Cells were spheroplasted with 50µg/ml Zymolyase (100T) in 0.1M potassium phosphate pH 7.5 at 30°C. Spheroplasts were blocked with PBST+3% BSA at room temperature for 30 minutes before incubation with primary antibody in PBST+3% BSA at 4°C overnight followed by incubation with secondary antibody at room temperature in PBST+3% BSA for 45 minutes in the dark. 15 minutes prior to the end of the secondary antibody incubation, Hoechst dye (ThermoFisher, H1398) was added to a final concentration of 2µg/ml. The anti-myc antibody was the same as above used at 1:500 dilution. The secondary antibody was an Alexa Fluor 488 conjugated goat anti-mouse antibody (ThermoFisher, A11001) used at 1:500 dilution. Images were acquired using a Zeiss microscope equipped with a Plan-Apochromat 100X 1.4 DIC oil immersion objective and Axiocam 503 mono camera. Exposure times were 50ms (DIC), 500ms (GFP), and 7000ms (DAPI). Images were processed using ZEN pro.

MMS Sensitivity Assay

Spot assays were performed as previously described in (3) with 0.015% MMS. This data is for strains containing a CAG-70 YAC; results for strains containing a no tract or CTG-70 YAC were similar. Assays were performed with at least two replicates for each tract length.

1. Foiani,M., Marini,F., Gamba,D., Lucchini,G. and Plevani,P. (1994) The B subunit of the DNA polymerase alpha-primase complex in Saccharomyces cerevisiae executes an essential function at the initial stage of DNA replication. *Mol. Cell. Biol.*, **14**, 923–33.
2. Longtine,M.S., McKenzie,A., Demarini,D.J., Shah,N.G., Wach,A., Brachat,A., Philippsen,P. and Pringle,J.R. (1998) Additional modules for versatile and economical PCR-based gene deletion and modification in Saccharomyces cerevisiae. *Yeast*, **14**, 953–961.
3. Frizzell,A., Nguyen,J.H.G., Petalcorin,M.I.R., Turner,K.D., Boulton,S.J., Freudenreich,C.H. and Lahue,R.S. (2014) RTEL1 inhibits trinucleotide repeat expansions and fragility. *Cell Rep.*, **6**, 827–835.

Table S1. Strains used in this study

Strain	Background	Genotype	Reference
CFY765	BY4705	*MATα, ade2Δ::hisG, his3Δ200, leu2Δ0, lys2Δ0, met15Δ0, trp1Δ63, ura3Δ0, can*^{R} YAC: *LEU2* No Tract *URA3*	Kerrest et al. 2009
CFY766	BY4705	*MATα, ade2Δ::hisG, his3Δ200, leu2Δ0, lys2Δ0, met15Δ0, trp1Δ63, ura3Δ0, can*^{R} YAC: *LEU2* CAG-70 *URA3*	Kerrest et al. 2009
CFY1626	BY4705	*MATa, ade2Δ::hisG, his3Δ200, leu2Δ0, lys2Δ0, met15Δ0, trp1Δ63, ura3Δ0, can*^{R} YAC: *LEU2* No Tract *URA3*	This study
CFY1628	BY4705	*MATa, ade2Δ::hisG, his3Δ200, leu2Δ0, lys2Δ0, met15Δ0, trp1Δ63, ura3Δ0, can*^{R} YAC: *LEU2* CAG-70 *URA3*	This study
CFY925 CFY926	BY4742	*MATα, his3Δ1, leu2Δ0, lys2Δ0, ura3Δ0, can*^{R}*, srs2Δ::KANMX6* YAC: *LEU2* No Tract *URA3*	Kerrest et al. 2009
CFY927 CFY928	BY4742	*MATα, his3Δ1, leu2Δ0, lys2Δ0, ura3Δ0, can*^{R}*, srs2Δ::KANMX6* YAC: *LEU2* CAG-70 *URA3*	Kerrest et al. 2009
CFY2623	BY4705	*MATα, ade2Δ::hisG, his3Δ200, leu2Δ0, lys2Δ0, met15Δ0, trp1Δ63, ura3Δ0, can*^{R}*, srs2Δ::TRP1* YAC: LEU2 CAG-70 URA3	This study
CFY1701	BY4705	*MATα, his3Δ1, leu2Δ0, lys2Δ0, ura3Δ0, can*^{R} YAC: *LEU2* CTG-70 *URA3*	Kerrest et al. 2009
CFY1712	BY4705	*MATα, his3Δ1, leu2Δ0, lys2Δ0, ura3Δ0, can*^{R}*, srs2Δ::KANMX6* YAC*: LEU2* CTG-70 *URA3*	Kerrest et al. 2009
CFY2497 CFY2498	BY4705	*MATα, ade2Δ::hisG, his3Δ200, leu2Δ0, lys2Δ0, met15Δ0, trp1Δ63, ura3Δ0, can*^{R}*, srs2-(1-860)-HYG* YAC: *LEU2* No Tract *URA3*	This study
CFY2087 CFY2088	BY4705	*MATα, ade2Δ::hisG, his3Δ200, leu2Δ0, lys2Δ0, met15Δ0, trp1Δ63, ura3Δ0, can*^{R}*, srs2-(1-860)-HYG* YAC: *LEU2* CAG-70 *URA3*	This study
CFY2499 CFY2500	BY4705	*MATα, his3Δ1, leu2Δ0, lys2Δ0, ura3Δ0, srs2-(1-860)-HYG* YAC: *LEU2* CTG-70 *URA3*	This study
CFY2501	BY4705	*MATα, ade2Δ::hisG, his3Δ200, leu2Δ0, lys2Δ0, met15Δ0, trp1Δ63, ura3Δ0, can*^{R}*, srs2-(875-902Δ)-HYG* YAC: *LEU2* No Tract *URA3*	This study
CFY2135 CFY2136	BY4705	*MATα, ade2Δ::hisG, his3Δ200, leu2Δ0, lys2Δ0, met15Δ0, trp1Δ63, ura3Δ0, can*^{R}*, srs2-(875-902Δ)-HYG* YAC: *LEU2* CAG-70 *URA3*	This study
CFY2503 CFY2504	BY4705	*MATα, his3Δ1, leu2Δ0, lys2Δ0, ura3Δ0, can*^{R}*, srs2-(875-902Δ)-HYG* YAC: *LEU2* CTG-70 *URA3*	This study
CFY2505	BY4705	*MATα, ade2Δ::hisG, his3Δ200, leu2Δ0, lys2Δ0,*	This study

CFY2506		*met15Δ0, trp1Δ63, ura3Δ0, can^R, srs2-K41R-HIS3MX6* YAC: *LEU2* No Tract *URA3*	
CFY2305 CFY2306 CFY2307	BY4705	*MATα, ade2Δ::hisG, his3Δ200, leu2Δ0, lys2Δ0, met15Δ0, trp1Δ63, ura3Δ0, can^R, srs2-K41R-HIS3MX6* YAC: *LEU2* CAG-70 *URA3*	This study
CFY2507 CFY2508	BY4705	*MATα, his3Δ1, leu2Δ0, lys2Δ0, ura3Δ0, can^R, srs2-K41R-HIS3MX6* YAC: *LEU2* CTG-70 *URA3*	This study
CFY2509 CFY2510	BY4705	*MATα, ade2Δ::hisG, his3Δ200, leu2Δ0, lys2Δ0, met15Δ0, trp1Δ63, ura3Δ0, can^R, srs2-(1-998)-HIS3MX6* YAC: *LEU2* No Tract *URA3*	This study
CFY2299 CFY2300	BY4705	*MATα, ade2Δ::hisG, his3Δ200, leu2Δ0, lys2Δ0, met15Δ0, trp1Δ63, ura3Δ0, can^R, srs2-(1-998)-HIS3MX6* YAC: *LEU2* CAG-70 *URA3*	This study
CFY2511 CFY2512	BY4705	*MATα, his3Δ1, leu2Δ0, lys2Δ0, ura3Δ0, can^R, srs2-(1-998)-HIS3MX6* YAC: *LEU2* CTG-70 *URA3*	This study
CFY3025	BY4705	*MATα, ade2Δ::hisG, his3Δ200, leu2Δ0, lys2Δ0, met15Δ0, trp1Δ63, ura3Δ0, can^R, srs2-K41R-HIS3MX6 rad51::KANMX6* YAC: *LEU2* CAG-70 *URA3*	This study
CFY841	BY4742	*MATα, his3Δ1, leu2Δ0, lys2Δ0, ura3Δ0, can^R rad51::KANMX6* YAC: *LEU2* CAG-70 *URA3*	Kerrest et al., 2009
CFY2356	BY4705	*MATα, ade2Δ::hisG, his3Δ200, leu2Δ0, lys2Δ0, met15Δ0, trp1Δ63, ura3Δ0, can^R srs2::srs2-K1081R K1089R K1142R::KANMX6* YAC: *LEU2* No Tract *URA3*	Su et al., 2015
CFY2472 CFY2473	BY4705	*MATα, ade2Δ::hisG, his3Δ200, leu2Δ0, lys2Δ0, met15Δ0, trp1Δ63, ura3Δ0, can^R srs2::srs2-K1081R K1089R K1142R::KANMX6* YAC: *LEU2* CAG-70 *URA3*	Su et al., 2015
CFY4051	BY4705	*MATα/a, ade2Δ::hisG, his3Δ200, leu2Δ0, lys2Δ0, met15Δ0, trp1Δ63, ura3Δ0, can^R srs2-(1-860)-HYG/SRS2* *YAC: LEU2* No Tract *URA3*	This study
CFY4052	BY4705	*MATα/a, ade2Δ::hisG, his3Δ200, leu2Δ0, lys2Δ0, met15Δ0, trp1Δ63, ura3Δ0, can^R srs2-(1-860)-HYG/SRS2* *YAC: LEU2* CAG-70 *URA3*	This study
CFY4053	BY4705	*MATα/a, ade2Δ::hisG, his3Δ200, leu2Δ0, lys2Δ0, met15Δ0, trp1Δ63, ura3Δ0, can^R srs2-(1-860)-HYG/SRS2* *YAC: LEU2* CTG-70 *URA3*	This study
CFY4054	BY4705	*MATα/a, ade2Δ::hisG, his3Δ200, leu2Δ0, lys2Δ0, met15Δ0, trp1Δ63, ura3Δ0, can^R srs2-K41R-*	This study

		HIS3MX6 /SRS2 YAC: LEU2 No Tract URA3	
CFY4055	BY4705	MATα/a, ade2Δ::hisG, his3Δ200, leu2Δ0, lys2Δ0, met15Δ0, trp1Δ63, ura3Δ0, can^R srs2-K41R-HIS3MX6 /SRS2 YAC: LEU2 CAG-70 URA3	This study
CFY4056	BY4705	MATα/a, ade2Δ::hisG, his3Δ200, leu2Δ0, lys2Δ0, met15Δ0, trp1Δ63, ura3Δ0, can^R srs2-K41R-HIS3MX6 /SRS2 YAC: LEU2 CTG-70 URA3	This study
CFY2600 CFY2601	BY4705	MATα, ade2Δ::hisG, his3Δ200, leu2Δ0, lys2Δ0, met15Δ0, trp1Δ63, ura3Δ0, can^R, mph1Δ::KANMX6 YAC: LEU2 No Tract URA3	This study
CFY2602 CFY2603	BY4705	MATα, ade2Δ::hisG, his3Δ200, leu2Δ0, lys2Δ0, met15Δ0, trp1Δ63, ura3Δ0, can^R, mph1Δ::KANMX6 YAC: LEU2 CAG-70 URA3	This study
CFY1664 CFY1665	BY4705	MATα, ade2Δ::hisG, his3Δ200, leu2Δ0, lys2Δ0, met15Δ0, trp1Δ63, ura3Δ0, can^R, rad5Δ::KANMX6 YAC: LEU2 No Tract URA3	This study
CFY1666	BY4705	MATα, ade2Δ::hisG, his3Δ200, leu2Δ0, lys2Δ0, met15Δ0, trp1Δ63, ura3Δ0, can^R, rad5Δ::KANMX6 YAC: LEU2 CAG-70 URA3	This study
CFY4104	BY4705	MATa, ade2Δ::hisG, his3Δ200, leu2Δ0, lys2Δ0, met15Δ0, trp1Δ63, ura3Δ0, can^R Srs2-13myc-KANMX6 YAC: LEU2 CAG-70 URA3	This study
CFY4105	BY4705	MATα, ade2Δ::hisG, his3Δ200, leu2Δ0, lys2Δ0, met15Δ0, trp1Δ63, ura3Δ0, can^R, srs2-(1-860)-13myc-KANMX6 YAC: LEU2 CAG-70 URA3	This study
CFY4161	BY4705	MATα, ade2Δ::hisG, his3Δ200, leu2Δ0, lys2Δ0, met15Δ0, trp1Δ63, ura3Δ0, can^R, srs2-(1-998)-13myc-KANMX6 YAC: LEU2 CAG-70 URA3	This study
GFY117	S288C	MATa ura3Δ851 leu2Δ1 his3Δ200 trp1Δ63 ade2-opal SUP4 arg2Δ::CTG98-TRP1	Kerrest et al., 2009
CFY3910	S288C	MATa ura3Δ851 leu2Δ1 his3Δ200 trp1Δ63 ade2-opal SUP4 arg2Δ::CTG98-TRP1 srs2Δ::KANMX6	This study
GFY177	S288C	MATa ura3Δ851 leu2Δ1 his3Δ200 trp1Δ63 ade2-opal SUP4 arg2Δ::CTG98-TRP1 srs2-(875-902Δ)-HYG	This study
GFY195	S288C	MATa ura3Δ851 leu2Δ1 his3Δ200 trp1Δ63 ade2-opal SUP4 arg2Δ::CTG98-TRP1 rad5Δ::KANMX4	This study
GFY196	S288C	MATa ura3Δ851 leu2Δ1 his3Δ200 trp1Δ63 ade2-opal SUP4 arg2Δ::CTG98-TRP1 mph1Δ::KANMX4	This study
GFY197	S288C	MATa ura3Δ851 leu2Δ1 his3Δ200 trp1Δ63 ade2-opal SUP4 arg2Δ::CTG98-TRP1 srs2-K41R-HIS3MX6 rad51Δ::KANMX6	This study
GFY198	S288C	MATa ura3Δ851 leu2Δ1 his3Δ200 trp1Δ63 ade2-opal SUP4 arg2Δ::CTG98-TRP1 srs2-(875-902Δ)-	This study

		HYG rad51Δ::KANMX6	
CFY2201	S288C	*MATa ura3Δ851 leu2Δ1 his3Δ200 trp1Δ63 ade2-opal SUP4 arg2Δ*::CTG98-*TRP1 srs2-(1-860)-HYG*	This study
CFY2301	S288C	*MATa ura3Δ851 leu2Δ1 his3Δ200 trp1Δ63 ade2-opal SUP4 arg2Δ*::CTG98-*TRP1 srs2-(1-998)-HIS3MX6*	This study
CFY2303	S288C	*MATa ura3Δ851 leu2Δ1 his3Δ200 trp1Δ63 ade2-opal SUP4 arg2Δ*::CTG98-*TRP1 srs2-K41R-HIS3MX6*	This study
CFY3078	S288C	*MATa ura3Δ851 leu2Δ1 his3Δ200 trp1Δ63 ade2-opal SUP4 arg2Δ*::CTG98-*TRP1 exo1Δ::KANMX6*	This study

Table S2. Instability Data: $(CAG)_{70}$ amplified from strains containing YAC CF1

Strain	No. colonies analyzed	Expansion (#)	Expansion (%)	p-value compared to wild-type	p-value compared to *srs2*Δ
wild-type	269	3	1.1		
*srs2*Δ	231	13	5.6	0.0047	
*rad51*Δ	184	9	4.9	0.0176	0.8275
srs2-(1-860)	152	8	5.3	0.0207	1
srs2-(875-902Δ)	162	7	4.3	0.0456	0.6458
srs2-K41R	201	10	5.0	0.0194	0.8321
srs2-(1-998)	122	2	1.6	0.6493	0.0977
srs2-3KR	157	3	1.9	0.6739	0.1158
*srs2-K41R rad51*Δ	174	2	1.5	1	0.0178
*mph1*Δ	290	8	2.8	0.2256	0.1179
*rad5*Δ	190	4	2.1	0.4453	0.0829
srs2 (1-860) /SRS2	151	5	3.3	0.1425	0.3349

Strain	No. colonies analyzed	Contraction (#)	Contraction (%)	p-value compared to wild-type	p-value compared to *srs2*Δ

wild-type	269	7	2.6		
srs2Δ	231	15	6.5	0.0474	
rad51Δ	184	25	13.6	0.0001	0.0186
srs2-(1-860)	152	19	12.5	0.0001	0.0649
srs2-(875-902Δ)	162	16	9.9	0.0016	0.2555
srs2-K41R	201	19	9.5	0.0018	0.2852
srs2-(1-998)	122	4	3.3	0.7454	0.3206
srs2-3KR	157	8	5.1	0.185	0.8265
srs2-K41R rad51Δ	173	3	1.7	0.7466	0.0474
mph1Δ	290	15	5.2	0.1322	0.5726
rad5Δ	190	9	4.7	0.3015	0.5287
srs2 (1-860) /SRS2	151	3	2.0	1	0.0487

Table S3. Fragility Data: Rate of FOA^R in strains containing YAC CF1

Strain	Repeat Length	# of Assays	Mean FOA^R x 10^{-6}	SEM	p-value compared to wild-type	p-value compared to *srs2Δ*
wild-type	No Tract	7	2.2	0.20		
srs2Δ	No Tract	9	2.2	0.31	0.9639	
srs2-(1-860)	No Tract	5	1.9	0.28	0.4528	0.5639
srs2-(875-902Δ)	No Tract	5	1.8	0.32	0.2877	0.4013
srs2-K41R	No Tract	4	1.8	0.35	0.3467	0.4765
srs2-(1-998)	No Tract	3	3.4	0.23	0.0076	0.0611
srs2-3KR	No Tract	3	2.6	0.85	0.4844	0.5656
mph1Δ	No Tract	4	2.1	0.29	0.7640	0.8126
rad5Δ	No Tract	3	3.5	0.74	0.0396	0.0794
wild-type	CAG-70	9	9.4	1.2		
srs2Δ	CAG-70	16	30	3.2	0.0001	
srs2-(1-860)	CAG-70	4	39	5.9	<0.0001	0.2355
srs2-(875-902Δ)	CAG-70	5	12	1.8	0.3248	0.0062
srs2-K41R	CAG-70	3	22	1.2	0.0003	0.3071
srs2-(1-998)	CAG-70	3	26	1.6	<0.0001	0.6097
srs2-3KR	CAG-70	3	4.8	0.2	0.0694	0.0044
mph1Δ	CAG-70	7	14	1.2	0.0244	0.0040
rad5Δ	CAG-70	3	9.8	3.4	0.8848	0.0187
wild-type	CTG-70	7	13	1.7		
srs2Δ	CTG-70	9	25	3.2	0.0070	
srs2-(1-860)	CTG-70	10	17	1.6	0.0614	0.0397
srs2-(875-902Δ)	CTG-70	6	9.6	0.87	0.1899	0.0021
srs2-K41R	CTG-70	10	26	3.1	0.0032	0.7418
srs2-(1-998)	CTG-70	6	18	1.3	0.0249	0.1293

Table S4. 2D Gel Analysis

Strain	Origin	Genotype	Exp. #	Time point	Pause	Cone
GFY117	Kerrest et al. 2009	*MATa ura3Δ851 leu2Δ1 his3Δ200 trp1Δ63 ade2-opal SUP4 arg2Δ::CTG98-TRP1*	1	60'	0.72	0.35
				90'	1.27	0.41
			2	60'	1.16	0.30
				90'	1.10	0.78
			3	30'	1.40	0.53
				40'	1.62	0.37
				60'	1.42	0.66
			4	60'	0.92	0.65
CFY3910	This work	*MATa ura3Δ851 leu2Δ1 his3Δ200 trp1Δ63 ade2-opal SUP4 arg2Δ::CTG98-TRP1 srs2Δ::KANMX6*	1	40'	0.73	0.39
				60'	0.81	0.60
				90'	1.20	0.90
CFY2201	This work	*MATa ura3Δ*851 *leu2Δ*1 *his3Δ*200 *trp1Δ*63 *ade2*-opal *SUP4 arg2Δ*::CTG98-*TRP1 srs2-(1-860)-HYG*	1	90’	0.91	0.68
			2	50’	1.08	0.72
				60’	1.06	0.49
				90’	0.72	0.67
CFY2301	This work	*MATa ura3Δ*851 *leu2Δ*1 *his3Δ*200 *trp1Δ*63 *ade2*-opal *SUP4 arg2Δ*::CTG98-*TRP1 srs2-(1-998)-HIS3*	1	50’	0.78	0.75
				60’	0.80	0.49
				90’	0.77	0.66
			2	40’	0.95	0.56
				50’	1.13	0.55
				60’	0.92	0.77
				90’	0.83	0.63
GFY177	This work	*MATa ura3Δ851 leu2Δ1 his3Δ200 trp1Δ63 ade2-opal SUP4 arg2Δ::CTG98-TRP1 srs2-(875-902Δ)-HYG*	1	60’	0.49	0.48
			2	40’	0.73	0.50
				50’	0.89	0.43
				60’	1.15	0.78
GFY198	This work	*MATa ura3Δ851 leu2Δ1 his3Δ200 trp1Δ63 ade2-opal SUP4 arg2Δ::CTG98-TRP1 srs2-(875-902Δ)-HYG rad51Δ::KANMX6*	1	60'	1.17	0.53

			1	90'	1.09	0.78
CFY2303	This work	*MATa ura3Δ851 leu2Δ1 his3Δ200 trp1Δ63 ade2-opal SUP4 arg2Δ::CTG98-TRP1 srs2-K41R-HIS3*	1	60’	1.09	0.55
			2	50’	1.11	1.22
			3	40’	0.75	0.84
				50’	1.02	0.91
				60’	1.00	0.89
				90’	0.80	0.91
GFY197	This work	*MATa ura3Δ851 leu2Δ1 his3Δ200 trp1Δ63 ade2-opal SUP4 arg2Δ::CTG98-TRP1 srs2-K41R-HIS3 rad51Δ::KANMX6*	1	60'	0.62	0.45
			2	50'	1.07	0.24
			3	50'	1.20	0.68
			3	60'	1.04	0.68
			3	90'	0.61	0.67
GFY195	This work	*MATa ura3Δ851 leu2Δ1 his3Δ200 trp1Δ63 ade2-opal SUP4 arg2Δ::CTG98-TRP1 rad5Δ::KANMX6*	1	60'	0.91	0.79
			2	50'	1.22	1.33
			2	60'	1.06	1.16
			2	90'	1.04	1.03
			3	60'	0.87	0.65
CFY3078	This work	*MATa ura3Δ851 leu2Δ1 his3Δ200 trp1Δ63 ade2-opal SUP4 arg2Δ::CTG98-TRP1 exo1Δ::KANMX6*	1	40'	0.55	1.21
				50'	0.81	0.90
				60'	0.65	1.09
				90'	0.39	1.14
GFY196	This work	*MATa ura3Δ851 leu2Δ1 his3Δ200 trp1Δ63 ade2-opal SUP4 arg2Δ::CTG98-TRP1 mph1Δ::KANMX6*	1	60'	1.01	0.85
				90'	0.99	0.93