

Table S7

Oligonucleotides used in this study. Listed 5' to 3', left to right.

Uppercase letters indicate sequence that anneals to the template during PCR or sequencing.

Lowercase letters indicate sequence added by PCR, either to provide homology for genomic integration or to provide restriction sites for cloning.

The bold, underlined sequence for OJL2317 is the cleavage site for I-SceI.

Subscript numbers are nucleotide coordinates provided by the *Saccharomyces* Genome Database (version R64-1-1)

Name	Sequence	Purpose
OJL2177	gtcatctaggccgaggAGATGCTAAGAGATAGTGATG	ChrV ₁₁₅₈₀₁₋₁₁₆₁₆₆ for Homology Left in pKJF017
OJL2178	gtcatctagggaattcGATTTATCTTCGTTTCCTGC	ChrV ₁₁₅₈₀₁₋₁₁₆₁₆₆ for Homology Left in pKJF017
OJL2180	gtcatctagggtcgacCTTTACAGTCCTGTCTTATTG	ChrV ₁₁₆₉₇₁₋₁₁₇₂₁₁ for Homology Right in pKJF017
OJL2181	gtcatctagggaattcAAAAGTATTATAAGTAAATGCATG	ChrV ₁₁₆₉₇₁₋₁₁₇₂₁₁ for Homology Right in pKJF017
OJL2204	gtcatctagagccggcAGATGCTAAGAGATAGTGATG	ChrV ₁₁₅₈₀₁₋₁₁₆₁₆₆ for Homology Left in pKJF019 and pKJF020
OJL2205	gtcatctagggtcgacGATTTATCTTCGTTTCCTGC	ChrV ₁₁₅₈₀₁₋₁₁₆₁₆₆ for Homology Left in pKJF019 and pKJF020
OJL2202	gtcatctagggtcgacTATGATACACGGTCCAATGG	ChrV ₅₂₉₆₈₋₅₃₂₅₉ for for <i>ACT1</i> terminator in pKJF019 and pKJF020
OJL2203	gtcatctaggccgaggTCTCTGCTTTTGTGCGCG	ChrV ₅₂₉₆₈₋₅₃₂₅₉ for for <i>ACT1</i> terminator in pKJF019 and pKJF020
OJL2206	gtcatctagggtcgacAAAAGTATTATAAGTAAATGCATG	ChrV ₁₁₆₉₇₁₋₁₁₇₂₁₁ for Homology Right in pKJF019 and pKJF020
OJL2207	gtcatctagggtaccCTTTACAGTCCTGTCTTATTG	ChrV ₁₁₆₉₇₁₋₁₁₇₂₁₁ for Homology Right in pKJF019 and pKJF020
OJL2158	gtcatctaggccgaggGGAAGAAACAGGGAGATAAGG	ChrIV ₅₁₂₁₅₁₋₅₁₂₉₁₂₈ for Homology Left in pKJF013, pKJF021 and pKJF026
OJL2159	gtcaaatgggatccGTAGCCTTCTAAAATCTGAGG	ChrIV ₅₁₂₁₅₁₋₅₁₂₉₁₂₈ for Homology Left in pKJF013, pKJF021 and pKJF026
OJL2167	gtcatctagccgggGCATCTGTGCGGTATTTAC	<i>RA3</i> element in pKJF013, pKJF021, and pKJF029
OJL2170	gtcatctagggtaccACAGTTAAGCCGCTAAAGGC	<i>RA3</i> element in pKJF013, pKJF021, and pKJF029
OJL2160	cgatcatagggtaccgctcaaatgcccgggGCAAGTGATTTTACGGAGGG	ChrIV ₅₁₉₇₂₁₋₅₂₀₁₆₃ for Homology Right in pKJF013
OJL2161	gtcaaatgggtcgacCAAGAATAGGTGGATAATACGG	ChrIV ₅₁₉₇₂₁₋₅₂₀₁₆₃ for Homology Right in pKJF013
OJL2265	cgatcataggccgggTTTCTATTTTTTAACCCTCTTG	ChrIV ₅₂₁₀₄₄₋₅₂₁₅₆₇ for Homology Right in pKJF021, pKJF026, and pKJF029
OJL2266	gtcaaatgggtcgacATGTACGCATAAATTTGAGAAG	ChrIV ₅₂₁₀₄₄₋₅₂₁₅₆₇ for Homology Right in pKJF021, pKJF026, and pKJF029
OJL2162	gtcatctaggccgaggACTGATGGTTCAACAGAGAAGC	ChrIV ₆₄₅₁₁₉₋₆₄₅₄₆₇ for Homology Left in pKJF014
OJL2163	cgatcatagggaattcgctcaaatgggatccCTTCCCTAGCTGAACTACCC	ChrIV ₆₄₅₁₁₉₋₆₄₅₄₆₇ for Homology Left in pKJF014
OJL2267	gtcatctaggccgaggCGTCCGCATCAATGGATAAG	ChrIV ₆₄₄₇₃₈₋₆₄₅₁₅₂ for Homology Left in pKJF022, pKJF027, and pKJF028
OJL2268	ccatctagccggatccTTTTTAAGTGTGGCTTCTCTG	ChrIV ₆₄₄₇₃₈₋₆₄₅₁₅₂ for Homology Left in pKJF022, pKJF027, and pKJF028
OJL2168	gtcatctagggtaccGAGCAGATTGACTGAGAGTG	<i>UR</i> element in pKJF014, pKJF024, and pKJF029
OJL2171	gtcaaatggaattctcaGGGTGTCATAATCAACCAATCG	<i>UR</i> element in pKJF014, pKJF024, and pKJF029
OJL2164	gtcatctagggaattcCAATGAGCGGCCATTATCG	ChrIV ₆₅₁₉₉₂₋₆₅₂₅₃₂ for Homology Right in pKJF014, pKJF022, and pKJF027
OJL2165	gtcaaatggtcgacCTTCTCGTCACGGAAGACCG	ChrIV ₆₅₁₉₉₂₋₆₅₂₅₃₂ for Homology Right in pKJF014, pKJF022, and pKJF027
OJL2543	gtcatctagggaattcGAGCAGATTGACTGAGAGTG	<i>TRP1</i> selectable marker in pKJF028
OJL2544	gtcatctagggtcgacGCATCTGTGCGGTATTTAC	<i>TRP1</i> selectable marker in pKJF028
OJL2097	gaactgaaggaaatagtaacggatttaggtGAGCAGATTGACTGAGAGTG	<i>dnl4::TRP1</i> , Step 1
OJL2098	caaaaaattaagcctccgcaaacgcaccaGCATCTGTGCGGTATTTAC	<i>dnl4::TRP1</i> , Step 1
OJL2099	gtggaaaataaatactaaaataaaaatctaGAACTGAAGGAAATAGTAACGG	<i>dnl4::TRP1</i> , Step 2
OJL2100	tacatatgtaggatagatataaataaactCAAAAAATTAAGCCTCCGC	<i>dnl4::TRP1</i> , Step 2
OJL2117	gaaggttctggtgcttgggtgtgtgtgGAGCAGATTGACTGAGAGTG	<i>rad52::TRP1</i> , Step 1
OJL2118	aatgatgcaaatTTTTATTGTTGCGCCAGGAGCGTGCATCTGTGCGGTATTTAC	<i>rad52::TRP1</i> , Step 1
OJL2119	atgcaacaaggaggttccaagaactgctGAAGTTCTGGTGGCTTTGG	<i>rad52::TRP1</i> , Step 2
OJL2120	aactagaggatttggagtaataaatAATGATGCAAATTTTTATTGTTTCGGC	<i>rad52::TRP1</i> , Step 2

Table S7 (continued)

OJL2105	aatattgcactatcctgttgaataatctttccagGAGCAGATTGACTGAGAGTG	<i>rad1::TRP1</i> , Step 1
OJL2106	tgatgtttaaaccagggttcgttaaataaacaatattGCATCTGTGCGGTATTTCCAC	<i>rad1::TRP1</i> , Step 1
OJL2107	tggtagagcattgtctaaatgtgtaaaaaAATATTGCACTATCCTGTTG	<i>rad1::TRP1</i> , Step 2
OJL2108	attttccactatagttaatcgcttttatacTGATGTTTTAACAGGGTTCCG	<i>rad1::TRP1</i> , Step 2
OJL2113	gttaaaggcctactaattgttatcgcatGAGCAGATTGACTGAGAGTG	<i>rad51::TRP1</i> , Step 1
OJL2114	cctgtgtaaaaaatagagacaagagaccaaaatGCATCTGTGCGGTATTTCCAC	<i>rad51::TRP1</i> , Step 1
OJL2115	tgtagcgacaagagcagacgtagtattGTTAAAGGCCTACTAATTTG	<i>rad51::TRP1</i> , Step 2
OJL2116	cctaagaaaaagaggagaattgaaagtaaCCTGTGTAATAAATAGAGACAAG	<i>rad51::TRP1</i> , Step 2
OJL2182	caaccagaaataggcttagttaactcaatcgtaattaGAGCAGATTGACTGAGAGTG	<i>pol32::TRP1</i> , Step 1
OJL2183	cacaattagtaaggaaggtttgaaaaaaaagaGCATCTGTGCGGTATTTCCAC	<i>pol32::TRP1</i> , Step 1
OJL2184	cagatcagctcgaataatattcacattaactaaCAACCAGAAATAGGCTTTAGTTAAC	<i>pol32::TRP1</i> , Step 2
OJL2185	atcacgtaagtgcattgtattatacattacatCACAAATAGTAATGGAAAGTGTG	<i>pol32::TRP1</i> , Step 2
OJL2192	agtgcacaatagattattttgtgaatctattaacaataGAGCAGATTGACTGAGAGTG	<i>msh3::TRP1</i> , Step 1
OJL2193	gtctgataatgctgatttagaacatacgtaccatccgaGCATCTGTGCGGTATTTCCAC	<i>msh3::TRP1</i> , Step 1
OJL2194	aatgaacctaaactggtactttgagagccaaagcAGTGCAAATAGATTTATTTGTTG	<i>msh3::TRP1</i> , Step 2
OJL2195	acgagaagtgaaatgaaaaataatcattattGTCTGATAATGCTGCATTTAGAAC	<i>msh3::TRP1</i> , Step 2
OJL2317	gcgataacatacaatggaaaatcacgttcagcgtccgcggcgctgctttccaacaatgctgcttagctcacgtaagt actccggatcgatctatattaccctgttatccctagcgttaactCCCGGGTTAATTAAGGCG	hphMX + I-SceI cut site (replaces kanMX in the reporter cassette)
OJL2318	CTGCGCACTTAACTTCGC	hphMX + I-SceI cut site (replaces kanMX in the reporter cassette)
OJL2636	atcctcagatttagaaggctacttcaaaaGGATGGCGGCGTTAGTATCG	<i>ChrIV_{515kb}::{hphMX, RA3}</i> , Step 1
OJL2637	agaaaaataaaacaagagggttaaaaaataGCATCTGTGCGGTATTTCCAC	<i>ChrIV_{515kb}::{hphMX, RA3}</i> , Step 1
OJL2638	gacatacattagtacatagctagaatATCCTCAGATTTTAGAAGGC	<i>ChrIV_{515kb}::{hphMX, RA3}</i> , Step 2
OJL2639	gcgaggggctgcaattcaagccaagaaAGAAAAATAAAACAAGAGGG	<i>ChrIV_{515kb}::{hphMX, RA3}</i> , Step 2
OJL2640	aaactaactttgctgacaccttttaaacGGATGGCGGCGTTAGTATCG	<i>ChrIV_{545kb}::{hphMX, RA3}</i> , Step 1
OJL2641	cataaaaattatagcccgcgttgatactGCATCTGTGCGGTATTTCCAC	<i>ChrIV_{545kb}::{hphMX, RA3}</i> , Step 1
OJL2642	gtcatattgtaaaaactaaatggaagacagAAACTAACTTTGTCGACACC	<i>ChrIV_{545kb}::{hphMX, RA3}</i> , Step 2
OJL2643	ggaaatagactccattgcatgattgctciCATAAAATATAGCCCGCG	<i>ChrIV_{545kb}::{hphMX, RA3}</i> , Step 2
OJL2644	tatgtattcaaatatttcgggaagagatGGATGGCGGCGTTAGTATCG	<i>ChrIV_{565kb}::{hphMX, RA3}</i> , Step 1
OJL2645	tttttaaattttaagtgcgttactttGCATCTGTGCGGTATTTCCAC	<i>ChrIV_{565kb}::{hphMX, RA3}</i> , Step 1
OJL2646	gaacaaataaaaacatttatttaaaaattTATGTATTTCAATATTTTCG	<i>ChrIV_{565kb}::{hphMX, RA3}</i> , Step 2
OJL2647	tcaaaagactgagtaataaagtattggaTTTTTTAAATTTTAAAGTGT	<i>ChrIV_{565kb}::{hphMX, RA3}</i> , Step 2
OJL2648	tatcatagccagtagcgggaacgactcaGGATGGCGGCGTTAGTATCG	<i>ChrIV_{576kb}::{hphMX, RA3}</i> , Step 1
OJL2649	tctgctaaagcatgtagtccatttagcGCATCTGTGCGGTATTTCCAC	<i>ChrIV_{576kb}::{hphMX, RA3}</i> , Step 1; <i>ChrIV_{576kb}::{UR, TRP1}</i> , Step 1
OJL2650	atctgttatactacaaaacaattacttctaTATCATAGCCAGTTAGCGGG	<i>ChrIV_{576kb}::{hphMX, RA3}</i> , Step 2; <i>ChrIV_{576kb}::{UR, TRP1}</i> , Step 2
OJL2651	tgatgttacccaatcaccgcgcttcgctTCTGCCTAAAGCATGGATAG	<i>ChrIV_{576kb}::{hphMX, RA3}</i> , Step 2; <i>ChrIV_{576kb}::{UR, TRP1}</i> , Step 2
OJL2652	aagtaaaatataagaatccagttccagtGGATGGCGGCGTTAGTATCG	<i>ChrIV_{607kb}::{hphMX, RA3}</i> , Step 1
OJL2653	gagatatttatttagcctgtaccgatcGCATCTGTGCGGTATTTCCAC	<i>ChrIV_{607kb}::{hphMX, RA3}</i> , Step 1; <i>ChrIV_{607kb}::{UR, TRP1}</i> , Step 1
OJL2654	aaaaaaagaaaagatattggttgaaAAGTAAATAATAGAAATCC	<i>ChrIV_{607kb}::{hphMX, RA3}</i> , Step 2; <i>ChrIV_{607kb}::{UR, TRP1}</i> , Step 2
OJL2655	acaagaaaacgaaaagaataataaaaagtaGAGATATTTATTATTAGCC	<i>ChrIV_{607kb}::{hphMX, RA3}</i> , Step 2; <i>ChrIV_{607kb}::{5'URA3, TRP1}</i> , Step 2
OJL2656	gatggttcaacagagaagccacagttaaaaGGATGGCGGCGTTAGTATCG	<i>ChrIV_{650kb}::{hphMX, RA3}</i> , Step 1
OJL2657	ttacagaacgataatggcgcgctcattgaGCATCTGTGCGGTATTTCCAC	<i>ChrIV_{650kb}::{hphMX, RA3}</i> , Step 1; <i>ChrIV_{650kb}::{UR, TRP1}</i> , Step 1
OJL2658	cacattctgtaaaaaaaagtaactGATGGTTCAACAGAGAAGCC	<i>ChrIV_{650kb}::{hphMX, RA3}</i> , Step 2; <i>ChrIV_{650kb}::{UR, TRP1}</i> , Step 2
OJL2659	attagctgattatgtaagtactattactTTACAGAACGATAATGGCGC	<i>ChrIV_{650kb}::{hphMX, RA3}</i> , Step 2; <i>ChrIV_{650kb}::{UR, TRP1}</i> , Step 2

Table S7 (continued)

OJL2697	tatcatagccagttagcgggaacgactcaTGAGAGTGCACCATACCACC	ChrIV _{576kb} ::{UR, TRP1}, Step 1
OJL2698	cgtggccaactgaagtaattcttagccgtTGAGAGTGCACCATACCACC	ChrIV _{592kb} ::{UR, TRP1}, Step 1
OJL2699	caagtgaactgcccgtttgcccggcgataGCATCTGTGCGGTATTTAC	ChrIV _{592kb} ::{UR, TRP1}, Step 1
OJL2700	gcgtaatccactcgggaagggcgcagctgcCGTGCCAACTGAAGTAATC	ChrIV _{592kb} ::{UR, TRP1}, Step 2
OJL2701	ataccctgctgcacagcgcgttgggtctCAAGTGAATTGCCGTTTTG	ChrIV _{592kb} ::{UR, TRP1}, Step 2
OJL2702	aagtaaaataatagaatccagttccagtTGAGAGTGCACCATACCACC	ChrIV _{607kb} ::{UR, TRP1}, Step 1
OJL2703	gatggttcaacagagaagccacagttaaaaTGAGAGTGCACCATACCACC	ChrIV _{650kb} ::{UR, TRP1}, Step 1
OJL2704	tagaggcatgataagaagcagacaacggaatTGAGAGTGCACCATACCACC	ChrIV _{713kb} ::{UR, TRP1}, Step 1
OJL2705	ccattgtaaaatgcctcaacgctcaatgGCATCTGTGCGGTATTTAC	ChrIV _{713kb} ::{UR, TRP1}, Step 1
OJL2706	aagtagttatttacgatttttaatccagTAGAGGCATGATAGAAGACG	ChrIV _{713kb} ::{UR, TRP1}, Step 2
OJL2707	tccacactctttattcgtgattactgagCCATTGAAAAATGCCTCCA	ChrIV _{713kb} ::{UR, TRP1}, Step 2
OJL2708	taagagaataaattcttcaaaatgtagTGAGAGTGCACCATACCACC	ChrIV _{753kb} ::{UR, TRP1}, Step 1
OJL2709	aatattctttgattccacataactgctGCATCTGTGCGGTATTTAC	ChrIV _{753kb} ::{UR, TRP1}, Step 1
OJL2710	ttgaagcaaaatgtaaaaaagaatattaTTAAGAGAATAAATTCTTTC	ChrIV _{753kb} ::{UR, TRP1}, Step 2
OJL2711	ataactatttataataatagaatcaactAATATTCTTTTGATTTCCAC	ChrIV _{753kb} ::{UR, TRP1}, Step 2
OJL2716	attccattgtgacaaaggctatgataTTAAGAGAATAAATTCTTTC	ChrIV _{875kb} ::{UR, TRP1}, Step 1
OJL2717	atTTTgggaaaattgctgggataattgctGCATCTGTGCGGTATTTAC	ChrIV _{875kb} ::{UR, TRP1}, Step 1
OJL2718	aaatggatgaaattgagataattggtggATTCCATTGTTGACAAAGGC	ChrIV _{875kb} ::{UR, TRP1}, Step 2
OJL2719	aaaaaatagctcttctgagaattcttgaATTTTGGGAAAATTGTCGGG	ChrIV _{875kb} ::{UR, TRP1}, Step 2
OJL2720	acacacatgcaactgttgaataaaaaatcTGAGAGTGCACCATACCACC	ChrIV _{985kb} ::{UR, TRP1}, Step 1
OJL2721	actaaaccactgctcacaattgttgaGCATCTGTGCGGTATTTAC	ChrIV _{985kb} ::{UR, TRP1}, Step 1
OJL2722	tattatgacacacatctaaacgttaataaaACACACATGCAACTTGTGG	ChrIV _{985kb} ::{UR, TRP1}, Step 2
OJL2723	ggcccaacgatggaacgttgattttaccACTAAACCACTTGCGCTCAC	ChrIV _{985kb} ::{UR, TRP1}, Step 2
OJL2724	aagtgttgggattgattggtgataaacTGAGAGTGCACCATACCACC	ChrIV _{1100kb} ::{UR, TRP1}, Step 1
OJL2725	tttaaaagcaactgaaacgcacggattgatGCATCTGTGCGGTATTTAC	ChrIV _{1100kb} ::{UR, TRP1}, Step 1
OJL2726	atTTaattaagatagtaactcttgaatAAGTGTGGGATTGCATTGG	ChrIV _{1100kb} ::{UR, TRP1}, Step 2
OJL2727	tgacataaatgataagaatgcgttatcaaaTTTAAAAGCAACTGAAACGC	ChrIV _{1100kb} ::{UR, TRP1}, Step 2
OJL2228	GCCAGAAAACAGATCTTATACC	Primer 1 for Junction PCR
OJL2269	CCGATGTGACTAATACTTGAGC	Primer 2 for Junction PCR
OJL2311	CGGAATTGACTGAGTTCTTGC	Primer 3 for Junction PCR
OJL2227	AGTAGAAATGAGGGAAGAAGC	Primer 4 for Junction PCR
OJL2449	GAGGACATACGTCGTGAAGC	MAK21 Probe
OJL2450	AGGCTTCTACTCGTTCAACG	MAK21 Probe
OJL2231	AGGACGACTGGAGTGATAGG	YOS9 Probe
OJL2232	AAACACATGAGTCACCAGGC	YOS9 Probe