

Table S1, related to Figure 1

Disomic Strains During Continuous Growth Experiments

Strain	Generations at day 9	Generations at day 14	Generation when doubling time decreased
Dis I	59	94	N/A
Dis II	63	97	N/A
Dis IV	37	64	12
Dis V	46	78	14
Dis VIII	49	84	24
Dis IX	51	82	38
Dis X	66	102	N/A
Dis XI	62	105	19
Dis XII	48	74	N/A
Dis XIII	51	87	36
Dis XIV	60	97	24
Dis XV	55	92	55
Dis XVI	41	75	26

*N/A = Not analyzed. No significant decrease in doubling time was detected during the continuous growth experiment.

Table S2, related to Figure 1
Summary of Karyotypes of Evolved Strains

STRAIN	STRAIN # ²	KARYOTYPE
Dis I-9.1 ¹	A25034	Parental
Dis I-9.2	A25035	Parental
Dis I-14.1	A25060	Parental
Dis I-14.2	A25061	Parental
Dis II-9.1	A25036	Parental
Dis II-9.2	A25037	Parental
Dis II-14.1	A25062	Parental
Dis II-14.2	A25063	Parental
Dis IV-9.1	A25038	2N - Chr VI
Dis IV-9.2	A25039	2N - Chr VI
Dis IV-14.1	A25064	2N - Chr VI
Dis IV-14.2	A25065	Disome II
Dis V-9.1	A25040	Parental
Dis V-9.2	A25041	Parental
Dis V-14.1	A25066	Parental
Dis V-14.2	A25067	Parental
Dis VIII-9.1	A25042	Parental
Dis VIII-9.2	A25043	Parental
Dis VIII-14.1	A25068	Parental
Dis VIII-14.2	A25069	Parental
Dis IX-9.1	A25044	Parental
Dis IX-9.2	A25045	Parental
Dis IX-14.1	A25070	Parental
Dis IX-14.2	A25071	Parental
Dis X-9.1	A25046	Parental
Dis X-9.2	A25047	Parental
Dis X-14.1	A25072	Parental
Dis X-14.2	A25073	Parental
Dis XI-9.1	A25048	Parental
Dis XI-9.2	A25049	Parental
Dis XI-14.1	A25074	Parental
Dis XI-14.2	A25075	Parental
Dis XII-9.1	A25050	Truncation (TEL12L-YLR035C), dup (Chr XIII)(TEL13L-YML046W)
Dis XII-9.2	A25051	Parental
Dis XII-14.1	A25076	Truncation (TEL12L-YLR035C), dup (Chr XIII)(TEL13L-YML046W)
Dis XII-14.2	A25077	Truncation (TEL12L-YLR035C), dup (Chr XIII)(TEL13L-YML046W)
Dis XIII-9.1	A25052	Parental
Dis XIII-9.2	A25053	Parental
Dis XIII-14.1	A25078	Parental
Dis XIII-14.2	A25079	Parental
Dis XIV-9.1	A25054	Parental
Dis XIV-9.2	A25055	Parental
Dis XIV-14.1	A25080	Truncation (YNL054W-YNR069C), dup (Chr XIII)(TEL13L-YML046W)
Dis XIV-14.2	A25081	Parental
Dis XV-9.1	A25056	Truncation (TEL15L-YOR192C), dup (Chr XIII)(TEL13L-YML046W)
Dis XV-9.2	A25057	Truncation (TEL15L-YOR192C), dup (Chr XIV)(TEL14L-YNL286W), dup (Chr II)
Dis XV-14.1	A25082	Truncation (YOL103W-YOR142W)
Dis XV-14.2	A25083	Truncation (TEL15L-YOR192C), dup (Chr XIV)(TEL14L-YNL286W)
Dis XVI-9.1	A25058	Parental
Dis XVI-9.2	A25059	Parental
Dis XVI-14.1	A25084	Parental
Dis XVI-14.2	A25085	Parental

¹9.1 and 9.2 refer to isolates 1 and 2 from day 9, respectively. 14.1 and 14.2 refer to isolates 1 and 2 from day 14, respectively.

²See to Table S6 for genotypes.

Table S4A, related to Table 1
Synonymous Genetic Changes in the Evolved Disomic Strains

STRAIN	GENE	SILENT MUTATION	METHOD ¹
Dis V-14.1 ²	FIR1, 217050 (het)	C to M	S
Dis IX-14.1	TOM40, 668865	A to C	T
Dis IX-14.1	YNL311C, 50665	G to A	T
Dis XIV-14.2	GLN3, 230700	C to T	T

Table S4B, related to Table 1
Mutations in the Parental Disomic Strains

STRAIN	GENE	MUTATION	METHOD ¹	DESCRIPTION
Dis V-14.1 ²	YCR043C, 206284	A to G	T, S	Silent
Dis V-14.1	Chr (XIII), 465155	G deletion	T	Deletion
Dis V-14.1	SAK1 (het)	A160E	S	
Dis V-14.1	VRG4	G270C	S	
Dis VIII-14.1	Chr XII, 493736	G to C	T	Intergenic
Dis VIII-14.1	CHO2, 804817	A to G	T	Silent
Dis VIII-14.1	DED81, 143311	G to K	T	Silent
Dis VIII-14.1	IST1/YNL266W, 144521	T to C	T	Silent
Dis IX-14.1	PRP8	T1544N	T	
Dis IX-14.1	SKN7	A203V	T	
Dis XI-9.1, Dis XI-9.2, Dis XI-14.1	BRE4	A154P	T, S	
Dis XI-9.1, Dis XI-9.2, Dis XI-14.1	DBF4, 559577	G to A	T, S	Silent
Dis XI-9.1, Dis XI-9.2, Dis XI-14.1	MKT1	F773Y	T, S	
Dis XI-9.1, Dis XI-9.2, Dis XI-14.1	MYO3 (het)	L836F	S	
Dis XI-9.1, Dis XI-9.2, Dis XI-14.1	Chr XI, 431019 (het)	G to R	S	Intergenic
Dis XI-9.1, Dis XI-9.2, Dis XI-14.1	ERP1, 154396	A to G	S	Silent
Dis XI-9.1, Dis XI-9.2, Dis XI-14.1	STT4	I1693L	S	
Dis XIII-9.1, Dis XIII-14.1	ATG20	K471T	T, S	
Dis XIII-9.1, Dis XIII-14.1	Chr VII, 20503	G to A	T, S	Intergenic
Dis XIII-9.1, Dis XIII-14.1	YGL036W	D903N	T, S	
Dis XIII-9.1, Dis XIII-14.1	PHO84	G25V	T, S	
Dis XIII-9.1, Dis XIII-14.1	Chr XV, 128508	C to T	T, S	Intergenic
Dis XIII-9.1, Dis XIII-14.1	TRS33	K89E	T, S	
Dis XIV-9.1, Dis XIV-9.2, Dis XIV-14.2	YGL140C	T537K	T, S	
Dis XIV-9.1, Dis XIV-9.2, Dis XIV-14.2	BIO5, 732966	A to G	T, S	Silent
Dis XVI-9.1, Dis XVI-14.1, Dis XVI-14.2	TOM1	P495R	S	
Dis XVI-9.1, Dis XVI-14.1, Dis XVI-14.2	NMD2	T343S	S	
Dis XVI-9.1, Dis XVI-14.1, Dis XVI-14.2	TRZ1	S373C	S	
Dis XVI-9.1, Dis XVI-14.1, Dis XVI-14.2	YLR345W	H372N	S	
Dis XVI-9.1, Dis XVI-14.1, Dis XVI-14.2	VPS41, 606704	C to T	S	Silent
Dis XVI-9.1, Dis XVI-14.1, Dis XVI-14.2	YFR020W, 193283	T to C	S	Silent
Dis XVI-9.1, Dis XVI-14.1, Dis XVI-14.2	FAS2, 112272	G to R	S	Silent

¹T = Tiling microarray, S = Solexa sequencing.

²9.1 and 9.2 refer to isolates 1 and 2 from day 9, respectively. 14.1 and 14.2 refer to isolates 1 and 2 from day 14, respectively.

Table S6, related to Extended Experimental Procedures

Strains Utilized in this Study

Wild-type

Strain Number	Genotype
A2587	<i>MATa, ade2-1, leu2-3, ura3, trp1-1, his3-11, 15, can1-100, GAL, psi+</i>
A2588	<i>MAT , ade2-1, leu2-3, ura3, trp1-1, his3-11, 15, can1-100, GAL, psi+</i>

Strain Number	Relevant Genotype
A11311	<i>MATa, ade1::HIS3, lys2::KanMX6</i>
A21953	<i>MAT , pgk1::pgk1-yEGFP-CaURA3</i>
A21954	<i>MATa, ade1::HIS3, lys2::KanMX6, pgk1::pgk1-yEGFP-CaURA3</i>
A22023	<i>MAT , ubp6::CaURA3</i>
A22024	<i>MATa, ade1::HIS3, lys2::KanMX6, ubp6::CaURA3</i>
A22365	<i>MAT , ubp6::ubp6-E256X-CaURA3</i>
A22366	<i>MATa, ade1::HIS3, lys2::KanMX6, ubp6::ubp6-E256X-CaURA3</i>
A22363	<i>MAT , intergenic region (181900-182000) between YFR016C and YFR017C::CaURA3</i>
A23504	<i>MATa, ade1::HIS3, lys2::KanMX6, intergenic region (181900-182000) between YFR016C and YFR017C::CaURA3</i>
A25094	<i>MAT , [YEPlac181+CUP1-pr-UBI4]</i>
A25126	<i>MATa, ade1::HIS3, lys2::KanMX6, pgk1::pgk1-yEGFP-CaURA3, [YEPlac181+CUP1-pr-UBI4]</i>
A25095	<i>MATa, ade1::HIS3, lys2::KanMX6, ubp6::CaURA3, [YEPlac181+CUP1-pr-UBI4]</i>
A25130	<i>MATa, ade1::HIS3, lys2::KanMX6, ubp6::ubp6-E256X-CaURA3 [YEPlac181+CUP1-pr-UBI4]</i>
A26337	<i>MAT , ubp6::ubp6CA</i>
A26338	<i>MATa, ade1::HIS3, lys2::KanMX6, ubp6::ubp6CA</i>
A26328	<i>MAT , rpn6-ts</i>
A25112	<i>MATa, ade1::HIS3, lys2::KanMX6, pgk1::pgk1-yEGFP-CaURA3, [YEPlac181]</i>

Parental Aneuploid Strains

Strain Number	Disomic for Chromosome	Relevant Genotype
A12683	I	<i>MATa, ade1::HIS3, ade1::KanMX6</i>
A12685	II	<i>MATa, lys2::HIS3, lys2::KanMX6</i>
A12687	IV	<i>MATa, trp1::HIS3, trp1::KanMX6</i>
A12689	X	<i>MATa, ura2::HIS3, ura2::KanMX6</i>
A12693	XII	<i>MATa, ade16::HIS3, ade16::KanMX6</i>

A12695	XIII	MATa, <i>ura5::HIS3, ura5::KanMX6</i>
A12697	XV	MATa, <i>leu9::HIS3, leu9::KanMX6</i>
A12700	XVI	MATa, <i>met12::HIS3, met12::KanMX6</i>
A13628	VIII	MATa, <i>intergenic region (119778-119573) between YHR006W and YHR007C::HIS3, intergenic region (119778-119573) between YHR006W and YHR007C::KanMX6</i>
A13771	XI	MATa, <i>intergenic region (430900-431000) between YKL006C-A and YKL006W::HIS3, intergenic region (430900-431000) between YKL006C-A and YKL006W::KanMX6</i>
A13975	IX	MATa, <i>intergenic region (341900-34200) between YIL009W and YIL008W::HIS3, intergenic region (341900-34200) between YIL009W and YIL008W::KanMX6</i>
A13979	XIV	MATa, <i>intergenic region (622880-622980) between YNL005C and YNL004W::HIS3, intergenic region (622880-622980) between YNL005C and YNL004W::KanMX6</i>
A14479	V	MATa, <i>can1::HIS3, intergenic region (187520-187620) between YER015W and YER016W::KanMX6</i>
A21986	X	MATa, <i>intergenic region (322250-322350) between YJL061W and YJL060W::HIS3, intergenic region (322250-322350) between YJL061W and YJL060W::KanMX6</i>
A21987	XIII	MATa, <i>intergenic region (309200-309300) between YMR017W and YMR018W::HIS3, intergenic region (309200-309300) between YMR017W and YMR018W::KanMX6</i>

Evolved Isolates (see Table S2 for karyotypes)

Strain Number	Disomic for Chromosome	Relevant Genotype
A25034	I	MATa, <i>ade1::HIS3, ade1::KanMX6</i>
A25035	I	MATa, <i>ade1::HIS3, ade1::KanMX6</i>
A25036	II	MATa, <i>lys2::HIS3, lys2::KanMX6</i>
A25037	II	MATa, <i>lys2::HIS3, lys2::KanMX6</i>
A25038	IV	MATa, <i>trp1::HIS3, trp1::KanMX6</i>
A25039	IV	MATa, <i>trp1::HIS3, trp1::KanMX6</i>
A25040	V	MATa, <i>can1::HIS3, intergenic region (187520-187620) between YER015W and YER016W::KanMX6</i>
A25041	V	MATa, <i>can1::HIS3, intergenic region (187520-187620) between YER015W and YER016W::KanMX6</i>
A25042	VIII	MATa, <i>intergenic region (119778-119573) between YHR006W and YHR007C::HIS3, intergenic region (119778-119573) between YHR006W and YHR007C::KanMX6</i>

		<i>YHR007C::KanMX6</i>
A25043	VIII	<i>MATa, intergenic region (119778-119573) between YHR006W and YHR007C::HIS3, intergenic region (119778-119573) between YHR006W and YHR007C::KanMX6</i>
A25044	IX	<i>MATa, intergenic region (341900-34200) between YIL009W and YIL008W::HIS3, intergenic region (341900-34200) between YIL009W and YIL008W::KanMX6</i>
A25045	IX	<i>MATa, intergenic region (341900-34200) between YIL009W and YIL008W::HIS3, intergenic region (341900-34200) between YIL009W and YIL008W::KanMX6</i>
A25046	X	<i>MATa, ura2::HIS3, ura2::KanMX6</i>
A25047	X	<i>MATa, ura2::HIS3, ura2::KanMX6</i>
A25048	XI	<i>MATa, intergenic region (430900-431000) between YKL006C-A and YKL006W::HIS3, intergenic region (430900-431000) between YKL006C-A and YKL006W::KanMX6</i>
A25049	XI	<i>MATa, intergenic region (430900-431000) between YKL006C-A and YKL006W::HIS3, intergenic region (430900-431000) between YKL006C-A and YKL006W::KanMX6</i>
A25050	XII	<i>MATa, ade16::HIS3, ade16::KanMX6</i>
A25051	XII	<i>MATa, ade16::HIS3, ade16::KanMX6</i>
A25052	XIII	<i>MATa, ura5::HIS3, ura5::KanMX6</i>
A25053	XIII	<i>MATa, ura5::HIS3, ura5::KanMX6</i>
A25054	XIV	<i>MATa, intergenic region (622880-622980) between YNL005C and YNL004W::HIS3, intergenic region (622880-622980) between YNL005C and YNL004W::KanMX6</i>
A25055	XIV	<i>MATa, intergenic region (622880-622980) between YNL005C and YNL004W::HIS3, intergenic region (622880-622980) between YNL005C and YNL004W::KanMX6</i>
A25056	XV	<i>MATa, leu9::HIS3, leu9::KanMX6</i>
A25057	XV	<i>MATa, leu9::HIS3, leu9::KanMX6</i>
A25058	XVI	<i>MATa, met12::HIS3, met12::KanMX6</i>
A25059	XVI	<i>MATa, met12::HIS3, met12::KanMX6</i>
A25060	I	<i>MATa, ade1::HIS3, ade1::KanMX6</i>
A25061	I	<i>MATa, ade1::HIS3, ade1::KanMX6</i>
A25062	II	<i>MATa, lys2::HIS3, lys2::KanMX6</i>
A25063	II	<i>MATa, lys2::HIS3, lys2::KanMX6</i>
A25064	IV	<i>MATa, trp1::HIS3, trp1::KanMX6</i>
A25065	IV	<i>MATa, trp1::HIS3, trp1::KanMX6</i>
A25066	V	<i>MATa, can1::HIS3, intergenic region (187520-187620)</i>

		<i>between YER015W and YER016W::KanMX6</i>
A25067	V	MATa, <i>can1::HIS3</i> , intergenic region (187520-187620) between YER015W and YER016W::KanMX6
A25068	VIII	MATa, intergenic region (119778-119573) between YHR006W and YHR007C::HIS3, intergenic region (119778-119573) between YHR006W and YHR007C::KanMX6
A25069	VIII	MATa, intergenic region (119778-119573) between YHR006W and YHR007C::HIS3, intergenic region (119778-119573) between YHR006W and YHR007C::KanMX6
A25070	IX	MATa, intergenic region (341900-34200) between YIL009W and YIL008W::HIS3, intergenic region (341900-34200) between YIL009W and YIL008W::KanMX6
A25071	IX	MATa, intergenic region (341900-34200) between YIL009W and YIL008W::HIS3, intergenic region (341900-34200) between YIL009W and YIL008W::KanMX6
A25072	X	MATa, <i>ura2::HIS3</i> , <i>ura2::KanMX6</i>
A25073	X	MATa, <i>ura2::HIS3</i> , <i>ura2::KanMX6</i>
A25074	XI	MATa, intergenic region (430900-431000) between YKL006C-A and YKL006W::HIS3, intergenic region (430900-431000) between YKL006C-A and YKL006W::KanMX6
A25075	XI	MATa, intergenic region (430900-431000) between YKL006C-A and YKL006W::HIS3, intergenic region (430900-431000) between YKL006C-A and YKL006W::KanMX6
A25076	XII	MATa, <i>ade16::HIS3</i> , <i>ade16::KanMX6</i>
A25077	XII	MATa, <i>ade16::HIS3</i> , <i>ade16::KanMX6</i>
A25078	XIII	MATa, <i>ura5::HIS3</i> , <i>ura5::KanMX6</i>
A25079	XIII	MATa, <i>ura5::HIS3</i> , <i>ura5::KanMX6</i>
A25080	XIV	MATa, intergenic region (622880-622980) between YNL005C and YNL004W::HIS3, intergenic region (622880-622980) between YNL005C and YNL004W::KanMX6
A25081	XIV	MATa, intergenic region (622880-622980) between YNL005C and YNL004W::HIS3, intergenic region (622880-622980) between YNL005C and YNL004W::KanMX6
A25082	XV	MATa, <i>leu9::HIS3</i> , <i>leu9::KanMX6</i>
A25083	XV	MATa, <i>leu9::HIS3</i> , <i>leu9::KanMX6</i>
A25084	XVI	MATa, <i>met12::HIS3</i> , <i>met12::KanMX6</i>
A25085	XVI	MATa, <i>met12::HIS3</i> , <i>met12::KanMX6</i>

GFP-Strains

Strain Number	Disomic for Chromosome	Relevant Genotype
A21955	I	MAT _a , ade1::HIS3, ade1::KanMX6, pgk1::pgk1-yEGFP-CaURA3
A21956	II	MAT _a , lys2::HIS3, lys2::KanMX6, pgk1::pgk1-yEGFP-CaURA3
A21957	IV	MAT _a , trp1::HIS3, trp1::KanMX6, pgk1::pgk1-yEGFP-CaURA3
A21958	V	MAT _a , can1::HIS3, intergenic region (187520-187620) between YER015W and YER016W::KanMX6, pgk1::pgk1-yEGFP-CaURA3
A21972	V	MAT _a , can1::HIS3, intergenic region (187520-187620) between YER015W and YER016W::KanMX6, pgk1::pgk1-yEGFP-CaURA3
A21959	VIII	MAT _a , intergenic region (119778-119573) between YHR006W and YHR007C::HIS3, intergenic region (119778-119573) between YHR006W and YHR007C::KanMX6, pgk1::pgk1-yEGFP-CaURA3
A21960	IX	MAT _a , intergenic region (341900-34200) between YIL009W and YIL008W::HIS3, intergenic region (341900-34200) between YIL009W and YIL008W::KanMX6, pgk1::pgk1-yEGFP-CaURA3
A21962	XI	MAT _a , intergenic region (430900-431000) between YKL006C-A and YKL006W::HIS3, intergenic region (430900-431000) between YKL006C-A and YKL006W::KanMX6, pgk1::pgk1-yEGFP-CaURA3
A21963	XII	MAT _a , ade16::HIS3, ade16::KanMX6, pgk1::pgk1-yEGFP-CaURA3
A21964	XIII	MAT _a , intergenic region (309200-309300) between YMR017W and YMR018W::HIS3, intergenic region (309200-309300) between YMR017W and YMR018W::KanMX6, pgk1::pgk1-yEGFP-CaURA3
A21965	XIV	MAT _a , intergenic region (622880-622980) between YNL005C and YNL004W::HIS3, intergenic region (622880-622980) between YNL005C and YNL004W::KanMX6, pgk1::pgk1-yEGFP-CaURA3
A21966	XV	MAT _a , leu9::HIS3, leu9::KanMX6, pgk1::pgk1-yEGFP-CaURA3
A21967	XVI	MAT _a , met12::HIS3, met12::KanMX6, pgk1::pgk1-yEGFP-CaURA3

URA3 Marked Strains

Strain Number	Disomic for Chromosome	Relevant Genotype
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A23505	I	<i>MATa, ade1::HIS3, ade1::KanMX6, intergenic region (181900-182000) between YFR016C and YFR017C:: CaURA3</i>
A23506	II	<i>MATa, lys2::HIS3, lys2::KanMX6, intergenic region (181900-182000) between YFR016C and YFR017C:: CaURA3</i>
A23508	V	<i>MAT , can1::HIS3, intergenic region (187520-187620) between YER015W and YER016W::KanMX6, intergenic region (181900-182000) between YFR016C and YFR017C:: CaURA3</i>
A23509	VIII	<i>MATa, intergenic region (119778-119573) between YHR006W and YHR007C::HIS3, intergenic region (119778-119573) between YHR006W and YHR007C::KanMX6, intergenic region (181900-182000) between YFR016C and YFR017C:: CaURA3</i>
A23510	IX	<i>MATa, intergenic region (341900-34200) between YIL009W and YIL008W::HIS3, intergenic region (341900-34200) between YIL009W and YIL008W::KanMX6, intergenic region (181900-182000) between YFR016C and YFR017C:: CaURA3</i>
A23512	XI	<i>MATa, intergenic region (430900-431000) between YKL006C-A and YKL006W::HIS3, intergenic region (430900-431000) between YKL006C-A and YKL006W::KanMX6, intergenic region (181900-182000) between YFR016C and YFR017C:: CaURA3</i>
A23514	XIII	<i>MATa, intergenic region (309200-309300) between YMR017W and YMR018W::HIS3, intergenic region (309200-309300) between YMR017W and YMR018W::KanMX6, intergenic region (181900-182000) between YFR016C and YFR017C:: CaURA3</i>
A23515	XIV	<i>MATa, intergenic region (622880-622980) between YNL005C and YNL004W::HIS3, intergenic region (622880-622980) between YNL005C and YNL004W::KanMX6, intergenic region (181900-182000) between YFR016C and YFR017C:: CaURA3</i>
A23516	XV	<i>MATa, leu9::HIS3, leu9::KanMX6, intergenic region (181900-182000) between YFR016C and YFR017C::CaURA3</i>
A23517	XVI	<i>MATa, met12::HIS3, met12::KanMX6, intergenic region (181900-182000) between YFR016C and YFR017C:: CaURA3</i>

ubp6-E256X Strains

Strain Number	Disomic for Chromosome	Relevant Genotype
A22367	I	<i>MATa, ade1::HIS3, ade1::KanMX6, ubp6::ubp6-</i>

		<i>E256X-CaURA3</i>
A22368	II	<i>MATa, lys2::HIS3, lys2::KanMX6, ubp6::ubp6-E256X-CaURA3</i>
A22369	IV	<i>MATa, trp1::HIS3, trp1::KanMX6, ubp6::ubp6-E256X-CaURA3</i>
A22370	V	<i>MAT^a, can1::HIS3, intergenic region (187520-187620) between YER015W and YER016W::KanMX6, ubp6::ubp6-E256X-CaURA3</i>
A22371	VIII	<i>MATa, intergenic region (119778-119573) between YHR006W and YHR007C::HIS3, intergenic region (119778-119573) between YHR006W and YHR007C::KanMX6, ubp6::ubp6-E256X-CaURA3</i>
A22387	IX	<i>MATa, intergenic region (341900-34200) between YIL009W and YIL008W::HIS3, intergenic region (341900-34200) between YIL009W and YIL008W::KanMX6, ubp6::ubp6-E256X-CaURA3</i>
A22390	XI	<i>MATa, intergenic region (430900-431000) between YKL006C-A and YKL006W::HIS3, intergenic region (430900-431000) between YKL006C-A and YKL006W::KanMX6, ubp6::ubp6-E256X-CaURA3</i>
A22391	XII	<i>MATa, ade16::HIS3, ade16::KanMX6, ubp6::ubp6-E256X-CaURA3</i>
A22392	XIII	<i>MATa, intergenic region (309200-309300) between YMR017W and YMR018W::HIS3, intergenic region (309200-309300) between YMR017W and YMR018W::KanMX6, ubp6::ubp6-E256X-CaURA3</i>
A22393	XIV	<i>MATa, intergenic region (622880-622980) between YNL005C and YNL004W::HIS3, intergenic region (622880-622980) between YNL005C and YNL004W::KanMX6, ubp6::ubp6-E256X-CaURA3</i>
A22394	XV	<i>MATa, leu9::HIS3, leu9::KanMX6, ubp6::ubp6-E256X-CaURA3</i>
A22395	XVI	<i>MATa, met12::HIS3, met12::KanMX6, ubp6::ubp6-E256X-CaURA3</i>

ubp6^Δ Strains

Strain Number	Disomic for Chromosome	Relevant Genotype
A22025	I	<i>MATa, ade1::HIS3, ade1::KanMX6, ubp6::CaURA3</i>
A22026	II	<i>MATa, lys2::HIS3, lys2::KanMX6, ubp6::CaURA3</i>
A22027	IV	<i>MATa, trp1::HIS3, trp1::KanMX6 ubp6::CaURA3</i>
A22028	V	<i>MATa, can1::HIS3, intergenic region (187520-187620) between YER015W and YER016W::KanMX6, ubp6::CaURA3</i>
A22029	VIII	<i>MATa, intergenic region (119778-119573) between YHR006W and YHR007C::HIS3, intergenic region</i>

		(119778-119573) between <i>YHR006W</i> and <i>YHR007C::KanMX6</i> , <i>ubp6::CaURA3</i>
A22030	IX	<i>MATa</i> , intergenic region (341900-34200) between <i>YIL009W</i> and <i>YIL008W::HIS3</i> , intergenic region (341900-34200) between <i>YIL009W</i> and <i>YIL008W::KanMX6</i> , <i>ubp6::CaURA3</i>
A22032	XI	<i>MATa</i> , intergenic region (430900-431000) between <i>YKL006C-A</i> and <i>YKL006W::HIS3</i> , intergenic region (430900-431000) between <i>YKL006C-A</i> and <i>YKL006W::KanMX6</i> , <i>ubp6::CaURA3</i>
A22033	XII	<i>MATa</i> , <i>ade16::HIS3</i> , <i>ade16::KanMX6</i> , <i>ubp6::CaURA3</i>
A22034	XIII	<i>MATa</i> , intergenic region (309200-309300) between <i>YMR017W</i> and <i>YMR018W::HIS3</i> , intergenic region (309200-309300) between <i>YMR017W</i> and <i>YMR018W::KanMX6</i> , <i>ubp6::CaURA3</i>
A22035	XIV	<i>MATa</i> , intergenic region (622880-622980) between <i>YNL005C</i> and <i>YNL004W::HIS3</i> , intergenic region (622880-622980) between <i>YNL005C</i> and <i>YNL004W::KanMX6</i> , <i>ubp6::CaURA3</i>
A22036	XV	<i>MATa</i> , <i>leu9::HIS3</i> , <i>leu9::KanMX6</i> , <i>ubp6::CaURA3</i>
A22037	XVI	<i>MATa</i> , <i>met12::HIS3</i> , <i>met12::KanMX6</i> , <i>ubp6::CaURA3</i>

Strains Carrying *CUP1-pr-UBI4*

Strain Number	Disomic for Chromosome	Relevant Genotype
A25127	V	<i>MATa</i> , <i>can1::HIS3</i> , intergenic region (187520-187620) between <i>YER015W</i> and <i>YER016W::KanMX6</i> , <i>pgk1::pgk1-yEGFP-CaURA3</i> , [<i>YEPlac181+CUP1-pr-UBI4</i>]
A25128	VIII	<i>MATa</i> , intergenic region (119778-119573) between <i>YHR006W</i> and <i>YHR007C::HIS3</i> , intergenic region (119778-119573) between <i>YHR006W</i> and <i>YHR007C::KanMX6</i> , <i>pgk1::pgk1-yEGFP-CaURA3</i> , [<i>YEPlac181+CUP1-pr-UBI4</i>]
A25129	XI	<i>MATa</i> , intergenic region (430900-431000) between <i>YKL006C-A</i> and <i>YKL006W::HIS3</i> , intergenic region (430900-431000) between <i>YKL006C-A</i> and <i>YKL006W::KanMX6</i> , <i>pgk1::pgk1-yEGFP-CaURA3</i> , [<i>YEPlac181+CUP1-pr-UBI4</i>]
A25098	V	<i>MATa</i> , <i>can1::HIS3</i> , intergenic region (187520-187620) between <i>YER015W</i> and <i>YER016W::KanMX6</i> , <i>ubp6::CaURA3</i> , [<i>YEPlac181+CUP1-pr-UBI4</i>]
A25101	XI	<i>MATa</i> , intergenic region (430900-431000) between <i>YKL006C-A</i> and <i>YKL006W::HIS3</i> , intergenic region (430900-431000) between <i>YKL006C-A</i> and <i>YKL006W::KanMX6</i> , <i>ubp6::CaURA3</i> ,

		[YEPlac181+CUP1-pr-UBI4]
A25131	VIII	MATa, intergenic region (119778-119573) between YHR006W and YHR007C::HIS3, intergenic region (119778-119573) between YHR006W and YHR007C::KanMX6, ubp6::ubp6-E256X-CaURA3, [YEPlac181+CUP1-pr-UBI4]
A25136	XI	MATa, intergenic region (430900-431000) between YKL006C-A and YKL006W::HIS3, intergenic region (430900-431000) between YKL006C-A and YKL006W::KanMX6, ubp6::ubp6-E256X-CaURA3, [YEPlac181+CUP1-pr-UBI4]

Strains Carrying YEPlac181

Strain Number	Disomic for Chromosome	Relevant Genotype
A25114	V	MATa, can1::HIS3, intergenic region (187520-187620) between YER015W and YER016W::KanMX6, pgk1::pgk1-yEGFP-CaURA3, [YEPlac181]
A25115	VIII	MATa, intergenic region (119778-119573) between YHR006W and YHR007C::HIS3, intergenic region (119778-119573) between YHR006W and YHR007C::KanMX6, pgk1::pgk1-yEGFP-CaURA3, [YEPlac181]
A25117	XI	MATa, intergenic region (430900-431000) between YKL006C-A and YKL006W::HIS3, intergenic region (430900-431000) between YKL006C-A and YKL006W::KanMX6, pgk1::pgk1-yEGFP-CaURA3, [YEPlac181]

ubp6CA Strains

Strain Number	Disomic for Chromosome	Relevant Genotype
A26340	VIII	MATa, intergenic region (119778-119573) between YHR006W and YHR007C::HIS3, intergenic region (119778-119573) between YHR006W and YHR007C::KanMX6, ubp6::ubp6CA
A26341	IX	MATa, intergenic region (341900-34200) between YIL009W and YIL008W::HIS3, intergenic region (341900-34200) between YIL009W and YIL008W::KanMX6, ubp6:: ubp6CA
A26342	XI	MATa, intergenic region (430900-431000) between YKL006C-A and YKL006W::HIS3, intergenic region (430900-431000) between YKL006C-A and YKL006W::KanMX6, ubp6:: ubp6CA
A26344	XV	MATa, leu9::HIS3, leu9::KanMX6, ubp6:: ubp6CA

***rpn6-ts* Strains**

Strain Number	Disomic for Chromosome	Relevant Genotype
A26329	I	MATa, ade1::HIS3, ade1::KanMX6, rpn6-ts
A26330	II	MATa, lys2::HIS3, lys2::KanMX6, rpn6-ts
A26331	V	MATa, can1::HIS3, intergenic region (187520-187620) between YER015W and YER016W::KanMX6, rpn6-ts
A26332	VIII	MATa, intergenic region (119778-119573) between YHR006W and YHR007C::HIS3, intergenic region (119778-119573) between YHR006W and YHR007C::KanMX6, rpn6-ts
A26333	IX	MATa, intergenic region (341900-34200) between YIL009W and YIL008W::HIS3, intergenic region (341900-34200) between YIL009W and YIL008W::KanMX6, rpn6-ts
A26334	X	MATa, intergenic region (322250-322350) between YJL061W and YJL060W::HIS3, intergenic region (322250-322350) between YJL061W and YJL060W::KanMX6, rpn6-ts
A26335	XI	MATa, intergenic region (430900-431000) between YKL006C-A and YKL006W::HIS3, intergenic region (430900-431000) between YKL006C-A and YKL006W::KanMX6, rpn6-ts
A26336	XVI	MATa, met12::HIS3, met12::KanMX6, rpn6-ts

***lys2Δ* Strains Utilized for Mass Spectroscopy**

Strain Number	Disomic for Chromosome	Relevant Genotype
A23489	V	MATa, lys2::URA3, can1::HIS3, intergenic region (187520-187620) between YER015W and YER016W::KanMX6
A23495	XIII	MATa, lys2::URA3, intergenic region (309200-309300) between YMR017W and YMR018W::HIS3, intergenic region (309200-309300) between YMR017W and YMR018W::KanMX6
A23499	V	MATa, lys2::URA3, can1::HIS3, intergenic region (187520-187620) between YER015W and YER016W::KanMX6, ubp6::CaURA3
A23503	XIII	MATa, lys2::URA3, intergenic region (309200-309300) between YMR017W and YMR018W::HIS3, intergenic region (309200-309300) between YMR017W and YMR018W::KanMX6, ubp6::CaURA3