

Supplemental Table 2. Yeast gene deletion mutants with increased tolerance to low zinc.

ORF	Gene	5 generations	15 generations
<i>YIL018W</i>	<i>RPL2B</i>	1	5.25
<i>YMR193W</i>	<i>MRPL24</i>	0.8	5.2
<i>YGR215W</i>	<i>RSM27</i>	0.8	5.2
<i>YBL038W</i>	<i>MRPL16</i>		5.1
<i>YOR065W</i>	<i>CYT1</i>	0.7	5
<i>YPL118W</i>	<i>MRP51</i>	0.85	4.9
<i>YDR347W</i>	<i>MRP1</i>	1	4.8
<i>YER087W</i>		1	4.65
<i>YOR205C</i>	<i>FMP38</i>	0.8	4.6
<i>YLR069C</i>	<i>MEF1</i>	0.95	4.5
<i>YLL033W</i>	<i>IRC19</i>	0.95	4.5
<i>YGR285C</i>	<i>ZUO1</i>	1.1	4.25
<i>YDR140W</i>	<i>MTQ2</i>	1	4.2
<i>YDR298C</i>	<i>ATP5</i>	1	4.2
<i>YOR035C</i>	<i>SHE4</i>	1.5	4.15
<i>YNL229C</i>	<i>URE2</i>		4.15
<i>YMR205C</i>	<i>PFK2</i>	0.7	4.1
<i>YER050C</i>	<i>RSM18</i>	1.1	4.1
<i>YFL016C</i>	<i>MDJ1</i>		4.1
<i>YMR097C</i>	<i>MTG1</i>	0.7	4.05
<i>YDL044C</i>	<i>MTF2</i>	0.7	4
<i>YEL050C</i>	<i>RML2</i>	0.9	4
<i>YDR174W</i>	<i>HMO1</i>	1.6	4
<i>YIL053W</i>	<i>RHR2</i>	1.1	4
<i>YKR085C</i>	<i>MRPL20</i>		4
<i>YLR068W</i>	<i>FYV7</i>	1.5	3.9
<i>YHR064C</i>	<i>SSZ1</i>	1.1	3.9
<i>YPL106C</i>	<i>SSE1</i>		3.9
<i>YNL003C</i>	<i>PET8</i>	0.9	3.85
<i>YOR201C</i>	<i>MRM1</i>		3.85
<i>YJL120W</i>		0.7	3.8
<i>YPR116W</i>		0.9	3.8
<i>YGR219W</i>			3.8
<i>YMR293C</i>		0.7	3.7
<i>YML061C</i>	<i>PIF1</i>	0.9	3.7
<i>YDR065W</i>		1.15	3.7
<i>YGL246C</i>	<i>RAI1</i>		3.7
<i>YPL005W</i>	<i>AEP3</i>		3.7
<i>YDR115W</i>			3.65
<i>YLR382C</i>	<i>NAM2</i>	0.8	3.6
<i>YHR067W</i>	<i>HTD2</i>	1	3.55
<i>YOR096W</i>	<i>RPS7A</i>	1.65	3.55
<i>YBR268W</i>	<i>MRPL37</i>	0.9	3.55
<i>YER017C</i>	<i>AFG3</i>		3.55
<i>YIL060W</i>			3.55
<i>YDR157W</i>		0.9	3.5
<i>YLR048W</i>	<i>RPS0B</i>	1.4	3.4

YMR267W	PPA2		3.4
YNL284C	MRPL10	0.7	3.35
YDR268W	MSW1	1.2	3.3
YDL202W	MRPL11	1	3.25
YKL169C			3.2
YGL076C	RPL7A	1.1	3.15
YBL090W	MRP21		3.15
YDR359C	VID21		3.1
YFL001W	DEG1		3.1
YGL219C	MDM34		3.1
YOL023W	IFM1		3.1
YBR026C	ETR1	0.6	3.05
YGL064C	MRH4		3.05
YGR240C	PFK1	1	3
YNR012W	URK1	1	3
YER077C		0.6	2.95
YPR024W	YME1		2.9
YLR192C	HCR1	1.2	2.85
YDL020C	RPN4	0.9	2.8
YJL204C	RCY1	0.9	2.8
YPL178W	CBC2		2.8
YFR001W	LOC1	1.3	2.8
YGR159C	NSR1	1.3	2.8
YEL033W		1.05	2.75
YOR078W	BUD21	1.3	2.75
YIL110W	MNI1	1	2.75
YDR241W	BUD26	0.8	2.65
YJR118C	ILM1	1.1	2.65
YBR168W	PEX32	1.4	2.65
YPL125W	KAP120		2.65
YOR183W	FYV12	1	2.6
YGR102C			2.6
YJR049C	UTR1		2.6
YHR011W	DIA4	0.8	2.6
YDR136C	VPS61		2.6
YDR020C		1	2.55
YML122C		1.1	2.55
YIL047C	SYG1	1	2.55
YJR032W	CPR7	1.4	2.5
YDR393W	SHE9		2.5
YIL017C	VID28		2.5
YOR211C	MGM1		2.45
YKL016C	ATP7		2.45
YHR041C	SRB2		2.45
YBR163W	DEM1	0.6	2.4
YDR337W	MRPS28		2.4
YFL023W	BUD27		2.4
YHR010W	RPL27A	0.95	2.35
YGL088W		0.9	2.35
YML095C-A			2.35
YKL138C	MRPL31		2.35

YMR066W	SOV1	0.75	2.3
YOL009C	MDM12	0.85	2.3
YLL006W	MMM1	0.9	2.3
YMR142C	RPL13B	1.1	2.3
YJL046W			2.3
YGL072C			2.3
YOR196C	LIP5		2.3
YPL047W	SGF11		2.3
YMR098C			2.25
YMR312W	ELP6		2.25
YHR194W	MDM31	0.6	2.2
YJL124C	LSM1		2.2
YKL110C	KTI12	0.9	2.15
YHR038W	RRF1		2.15
YPR131C	NAT3	0.9	2.1
YGL127C	SOH1		2.1
YDL056W	MBP1		2.1
YAL020C	ATS1		2.1
YKL134C	39356	0.8	2.1
YPR132W	RPS23B	0.8	2.1
YJR034W	PET191		2.1
YGL105W	ARC1		2.1
YOR001W	RRP6	0.9	2.05
YBR106W	PHO88		2.05
YDR350C	ATP22		2.05
YER074W	RPS24A	0.95	2
YDR126W	SWF1		2
YCR094W	CDC50	0.9	2
YPL157W	TGS1		2
YLR061W	RPL22A		1.95
YNL005C	MRP7		1.95
YNL184C			1.95
YLR410W	VIP1		1.95
YBR181C	RPS6B	0.7	1.95
YCR028C-A	RIM1		1.95
YGR257C	MTM1		1.95
YLR368W	MDM30		1.9
YLR287C-A	RPS30A		1.9
YBR266C	SLM6		1.9
YAL026C	DRS2		1.9
YOR375C	GDH1		1.9
YPR074C	TKL1		1.9
YDR463W	STP1		1.9
YPL090C	RPS6A	0.6	1.9
YOR241W	MET7		1.9
YDR083W	RRP8	0.75	1.85
YIL098C	FMC1		1.85
YFL018C	LPD1		1.85
YPL102C			1.85
YCL058C	FYV5	0.6	1.85
YLR052W	IES3		1.85

YHR162W		0.8	1.8
YGR160W		0.95	1.8
YGL136C	MRM2		1.8
YNL071W	LAT1		1.8
YGR118W	RPS23A	0.7	1.8
YJL136C	RPS21B	0.7	1.8
YPR066W	UBA3		1.8
YDL083C	RPS16B		1.8
YIL015C-A			1.8
YDL082W	RPL13A		1.8
YOR039W	CKB2		1.75
YDR237W	MRPL7		1.75
YDR450W	RPS18A	0.8	1.7
YIR026C	YVH1	0.9	1.7
YER156C			1.7
YGR162W	TIF4631	0.9	1.7
YBR221C	PDB1		1.7
YOL100W	PKH2		1.7
YMR282C	AEP2		1.65
YER139C			1.65
YMR064W	AEP1		1.65
YDR194C	MSS116		1.65
YGR220C	MRPL9		1.65
YMR188C	MRPS17	0.5	1.6
YHL011C	PRS3		1.6
YNL271C	BNI1		1.6
YJR145C	RPS4A		1.6
YNL069C	RPL16B		1.6
YLR423C	ATG17		1.6
YDL151C	BUD30		1.6
YLR262C	YPT6		1.6
YNL294C	RIM21		1.6
YOR246C			1.55
YPL101W	ELP4		1.55
YER081W	SER3		1.55
YOR061W	CKA2		1.55
YGL080W	FMP37		1.55
YLR420W	URA4		1.55
YLR264W	RPS28B		1.55
YGL147C	RPL9A		1.55
YIL093C	RSM25		1.55
YBR048W	RPS11B		1.55
YJL063C	MRPL8		1.5
YNL199C	GCR2		1.5
YAL044C	GCV3		1.5
YML026C	RPS18B		1.5
YGR163W	GTR2		1.5
YBR162C	TOS1		1.5
YNL096C	RPS7B	0.7	1.45
YHR034C	PIH1		1.45
YMR072W	ABF2		1.45

YDR377W	ATP17		1.45
YNL141W	AAH1		1.45
YPR166C	MRP2		1.45
YPL214C	THI6		1.45
YGL019W	CKB1		1.45
YNL177C	MRPL22		1.4
YIR005W	IST3		1.4
YGR135W	PRE9		1.4
YKR024C	DBP7		1.4
YIL041W	GVP36		1.4
YOR150W	MRPL23		1.4
YPL148C	PPT2		1.4
YHL027W	RIM101		1.4
YOL001W	PHO80		1.4
YPR051W	MAK3		1.4
YML121W	GTR1		1.4
YGL253W	HXK2		1.4
YGR101W	PCP1		1.4
YMR099C		0.85	1.35
YOR274W	MOD5		1.35
YLR021W	IRC25		1.35
YDR477W	SNF1		1.35
YDR405W	MRP20		1.35
YLR062C	BUD28		1.35
YDR516C	EMI2		1.35
YMR089C	YTA12		1.3
YDR363W-A	SEM1	0.7	1.3
YGR272C		0.8	1.3
YNL091W	NST1	0.8	1.3
YOR167C	RPS28A		1.3
YOR182C	RPS30B		1.3
YHR081W	LRP1		1.3
YML013W	SEL1		1.3
YOR006C			1.3
YGR200C	ELP2		1.3
YKL074C	MUD2		1.3
YLR357W	RSC2		1.3
YKR020W	VPS51		1.3
YPL065W	VPS28		1.3
YPL226W	NEW1		1.3
YGR255C	COQ6		1.3
YDR360W	OPI7		1.3
YIL077C			1.3
YPL029W	SUV3		1.3
YOR030W	DFG16		1.25
YDL090C	RAM1	0.7	1.25
YKR074W			1.25
YBR077C	SLM4		1.25
YLR200W	YKE2		1.25
YHR203C	RPS4B		1.25
YOR271C	FSF1		1.25

YOL095C	HMI1		1.25
YLR014C	PPR1		1.25
YPR101W	SNT309	0.95	1.2
YOL121C	RPS19A	0.9	1.2
YBL071C		0.8	1.2
YDL032W			1.2
YOR275C	RIM20		1.2
YGL046W			1.2
YDL081C	RPP1A		1.2
YBL024W	NCL1		1.2
YBR267W	REI1	0.6	1.2
YNL054W	VAC7		1.2
YJL062W	LAS21		1.2
YGL066W	SGF73		1.2
YMR216C	SKY1		1.2
YDR512C	EMI1		1.2
YER164W	CHD1		1.2
YNL079C	TPM1		1.2
YOR043W	WHI2		1.2
YGL213C	SKI8		1.2
YER040W	GLN3		1.2
YCL037C	SRO9		1.2
YER116C	SLX8		1.2
YOR270C	VPH1		1.2
YGL129C	RSM23		1.2
YGR165W	MRPS35		1.2
YKR057W	RPS21A		1.2
YEL054C	RPL12A		1.2
YCR077C	PAT1		1.2
YLR388W	RPS29A		1.2
YJR055W	HIT1	0.8	1.15
YBR058C	UBP14		1.15
YLR384C	IKI3		1.15
YPL173W	MRPL40		1.15
YNL120C		0.8	1.15
YPR189W	SKI3	0.7	1.15
YMR063W	RIM9		1.15
YLR369W	SSQ1		1.15
YGR122W			1.15
YHR147C	MRPL6		1.15
YNL148C	ALF1		1.15
YKR007W	MEH1		1.15
YER141W	COX15		1.15
YMR230W	RPS10B		1.15
YPL086C	ELP3	0.8	1.1
YBR272C	HSM3		1.1
YGL035C	MIG1		1.1
YNL119W	NCS2	0.8	1.1
YPL144W			1.1
YLR139C	SLS1		1.1
YGR259C			1.1

YMR258C			1.1
YLR239C	LIP2		1.1
YPR106W	ISR1		1.1
YLR074C	BUD20		1.1
YPR130C			1.1
YJL208C	NUC1		1.1
YNL227C	JJJ1		1.1
YGR182C			1.1
YGL043W	DST1		1.1
YPR099C			1.1
YDR024W	FYV1		1.1
YDR462W	MRPL28		1.1
YMR100W	MUB1		1.1
YPL213W	LEA1		1.1
YPR070W	MED1		1.05
YHR193C	EGD2		1.05
YNL252C	MRPL17		1.05
YLR185W	RPL37A		1.05
YHR100C			1.05
YOR295W	UAF30		1.05
YGR214W	RPS0A	0.7	1.05
YKR023W			1.05
YJL023C	PET130		1.05
YDR204W	COQ4		1.05
YDR447C	RPS17B		1.05
YGL214W			1.05
YHR066W	SSF1		1.05
YHR116W	COX23		1.05
YIL006W	YIA6		1.05
YIL076W	SEC28		1.05
YBR069C	TAT1		1.05
YPL097W	MSY1		1
YMR287C	DSS1		1
YER110C	KAP123	0.9	1
YOL041C	NOP12		1
YJL149W			1
YPL270W	MDL2		1
YLR201C	COQ9		1
YNR020C			1
YML128C	MSC1		1
YBR044C	TCM62		1
YNL055C	POR1		1
YMR116C	ASC1		1
YOR125C	CAT5		1
YDR322W	MRPL35		1
YJL098W	SAP185		1
YLR024C	UBR2		1
YLR391W			1
YNL226W			1
YCR031C	RPS14A		1
YDR048C		0.8	1

YGR192C	TDH3		1
YOR330C	MIP1		1
YPL061W	ALD6		1
YGL163C	RAD54		1
YGR076C	MRPL25		1
YNL228W			0.95
YGR206W	MVB12		0.95
YJL135W			0.95
YHR051W	COX6		0.95
YOR376W			0.95
YLR099C	ICT1		0.95
YPR057W	BRR1		0.95
YNL248C	RPA49	0.75	0.9
YJL150W			0.9
YJL179W	PFD1		0.9
YIL133C	RPL16A		0.9
YDR385W	EFT2		0.9
YDR025W	RPS11A		0.9
YGR081C	SLX9		0.9
YJL141C	YAK1		0.9
YNL121C	TOM70		0.9
YAR014C	BUD14		0.9
YPR100W	MRPL51		0.9
YDL023C			0.9
YIL005W	EPS1		0.9
YLR202C			0.9
YLR448W	RPL6B	0.8	0.9
YEL013W	VAC8		0.9
YNL198C			0.9
YPR018W	RLF2		0.9
YPR069C	SPE3		0.9
YDL136W	RPL35B		0.9
YMR228W	MTF1		0.9
YPL062W			0.9
YBR290W	BSD2		0.9
YIL028W			0.9
YDR297W	SUR2		0.85
YDR332W	IRC3		0.85
YMR075C-A			0.85
YOR309C			0.85
YKL040C	NFU1		0.85
YOR135C	IRC14		0.85
YLR180W	SAM1		0.8
YGR260W	TNA1		0.8
YJR148W	BAT2		0.8
YBL080C	PET112		0.8
YPL089C	RLM1		0.8
YOR355W	GDS1		0.8
YPL037C	EGD1		0.8
YNL215W	IES2		0.8
YNR036C			0.8

YIL095W	PRK1		0.8
YGL031C	RPL24A		0.8
YLR237W	THI7		0.8
YOR136W	IDH2		0.8
YER153C	PET122		0.8
YMR075W	RCO1		0.8
YML014W	TRM9		0.8
YOR076C	SKI7		0.8
YJL134W	LCB3		0.8
YNL023C	FAP1		0.8
YBR099C			0.8
YER174C	GRX4		0.8
YJL133W	MRS3		0.8
YGR187C	HGH1		0.8
YJL168C	SET2		0.8
YIL069C	RPS24B		0.8
YDR073W	SNF11		0.8
YLR111W			0.8
YOR358W	HAP5		0.8
YGL143C	MRF1		0.8
YJR066W	TOR1		0.8
YJL159W	HSP150		0.75
YHR103W	SBE22		0.75
YER058W	PET117		0.7
YJR059W	PTK2		0.7
YER154W	OXA1		0.7
YMR154C	RIM13		0.7
YML073C	RPL6A		0.7
YML024W	RPS17A		0.7
YGR150C			0.7
YMR241W	YHM2		0.7
YNL288W	CAF40		0.7
YPL099C	FMP14		0.7
YOL068C	HST1		0.7
YLR006C	SSK1		0.7
YMR313C	TGL3		0.7
YKL007W	CAP1		0.7
YDL094C			0.7
YLR207W	HRD3		0.7
YMR223W	UBP8		0.7
YJR082C	EAF6		0.7
YJL164C	TPK1		0.7
YKL206C	ADD66		0.7
YJR005W	APL1		0.7
YLR144C	ACF2		0.7
YGL034C			0.7
YIL016W	SNL1		0.65
YMR036C	MIH1		0.6
YBR114W	RAD16		0.6
YHR073W	OSH3		0.6
YIL050W	PCL7		0.6

YIL065C	FIS1		0.6
YLR289W	GUF1		0.6
YJL117W	PHO86	2.8	
YCR028C	FEN2	1.9	
YCR047C	BUD23	1.6	
YML035C	AMD1	1.45	
YPL161C	BEM4	1.45	
YOR209C	NPT1	1.45	
YPR067W	ISA2	1.4	
YGL135W	RPL1B	1.35	
YLL027W	ISA1	1.3	
YML097C	VPS9	1.25	
YOR221C	MCT1	1.25	
YKR026C	GCN3	1.2	
YLR177W		1.2	
YPL271W	ATP15	1.2	
YEL045C		1.2	
YKL009W	MRT4	1.2	
YDL198C	GGC1	1.15	
YOL108C	INO4	1.15	
YKL170W	MRPL38	1.1	
YIR033W	MGA2	1.1	
YJL075C	APQ13	1.1	
YHR120W	MSH1	1.05	
YFR009W	GCN20	1.05	
YJR040W	GEF1	1.05	
YPL180W	TCO89	1	
YLR439W	MRPL4	1	
YMR014W	BUD22	1	
YLR091W		1	
YMR123W	PKR1	1	
YNL064C	YDJ1	1	
YGR157W	CHO2	1	
YHR059W	FYV4	0.95	
YLR403W	SFP1	0.9	
YDR161W		0.9	
YPL104W	MSD1	0.9	
YMR058W	FET3	0.9	
YER145C	FTR1	0.9	
YJL121C	RPE1	0.9	
YCR063W	BUD31	0.9	
YDL160C	DHH1	0.9	
YDR175C	RSM24	0.9	
YDR123C	INO2	0.85	
YPL002C	SNF8	0.8	
YKL003C	MRP17	0.8	
YJL102W	MEF2	0.8	
YDR296W	MHR1	0.8	
YAL023C	PMT2	0.8	
YOR089C	VPS21	0.8	
YPR047W	MSF1	0.8	

<i>YFL036W</i>	<i>RPO41</i>	0.8	
<i>YOR235W</i>	<i>IRC13</i>	0.75	
<i>YLR214W</i>	<i>FRE1</i>	0.7	
<i>YDR195W</i>	<i>REF2</i>	0.7	
<i>YKR084C</i>	<i>HBS1</i>	0.7	
<i>YDR049W</i>		0.7	
<i>YDR269C</i>		0.7	