**Additional File 2:** Genes identified by functional profiling in at least two out of three independent replicate experiments. Deletion of these genes affects the fitness of mutant strains in iron deficiency. The requirement for growth of each gene was quantified as a  $\log_2$  ratio of growth of the corresponding mutant strain in YPD with BPS compared to YPD alone. The  $\log_2$  fitness represents the average of the significant values in these experiments. A negative value indicates sensitivity to BPS treatment while a positive one indicates resistance to BPS treatment.

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ORF	Gene	Log <sub>2</sub> fitness
YDR269C	CCC2	-4.8
YER145C	FTR1	-4.7
YNL259C	ATX1	-4.6
YPL170W	DAP1	-4.3
YDR455C	NHX1	-4.3
YMR058W	FET3	-3.9
YPL182C	CTI6	-3.7
YPL181W	CTI6	-3.7
YJR040W	GEF1	-3.6
YKR052C	MRS4	-3.5
YJR033C	RAV1	-3.5
YCL008C	STP22	-3.4
YPL065W	VPS28	-3.3
YHL020C	OPI1	-3.3
YMR054W	STV1	-3.2
YLR025W	SNF7	-3.2
YIR033W	MGA2	-3.1
YKR019C	IRS4	-3.0
YGL045W	RIM8	-3.0
YBR164C	ARL1	-2.9
YPL139C	UME1	-2.9
YHR045W		-2.7
YJL211C	PEX2	-2.7
YLR417W	VPS36	-2.7
YJR102C	VPS25	-2.7
YHL027W	RIM101	-2.6
YDR203W	RAV2	-2.6
YJL004C	SYS1	-2.6
YDR202C	RAV2	-2.6

ORF	Gene	Log <sub>2</sub> fitness
YDL118W	YDL119c	-2.6
YGL153W	PEX14	-2.6
YMR057C	FET3	-2.6
YDR271C	CCC2	-2.6
YDR265W	PEX10	-2.6
YJL094C	KHA1	-2.5
YDL065C	PEX19	-2.5
YGL045W	RIM8	-2.5
YGR122W		-2.5
YDL119C		-2.4
YBR035C	PDX3	-2.4
YML071C	COG8	-2.4
YLL043W	FPS1	-2.4
YMR063W	RIM9	-2.3
YPL002C	SNF8	-2.3
YDR329C	PEX3	-2.3
YOR089C	VPS21	-2.3
YOR275C	RIM20	-2.3
YGL148W	ARO2	-2.2
YPR024W	YME1	-2.2
YLR214W	FRE1	-2.2
YGL152C	PEX14	-2.2
YKL041W	VPS24	-2.2
YKL213C	DOA1	-2.2
YNR006W	VPS27	-2.2
YMR202W	ERG2	-2.1
YKL197C	PEX1	-2.1
YCR068W	ATG15	-2.1
YMR154C	RIM13	-2.1

ORF	Gene	Log <sub>2</sub> fitness
YNL294C	RIM21	-2.1
YCR033W	SNT1	-2.1
YGL212W	VAM7	-2.1
YDR456W	NHX1	-2.1
YNL041C	COG6	-2.1
YKR029C	SET3	-2.1
YLR191W	PEX13	-2.1
YCR079W		-2.1
YAL024C	LTE1	-2.0
YPL051W	ARL3	-2.0
YGR077C	PEX8	-2.0
YOL081W	IRA2	-2.0
YLR176C	RFX1	-2.0
YLR085C	ARP6	-2.0
YDL226C	GCS1	-2.0
YHR200W	RPN10	-2.0
YBR058C	UBP14	-2.0
YLR119W	SRN2	-2.0
YJL204C	RCY1	-2.0
YIL065C	FIS1	-1.9
YDR048C		-1.9
YDR349C	YPS7	-1.9
YJL095W	BCK1	-1.9
YJL024C	APS3	-1.9
YGL005C	COG7	-1.8
YPR173C	VPS4	-1.8
YMR258C		-1.8
YDR484W	VPS52	-1.8
YDR334W	SWR1	-1.8
YMR183C	SSO2	-1.8
YOR123C	LEO1	-1.8
YLR027C	AAT2	-1.7
YMR077C	VPS20	-1.7
YDR049W		-1.7
YOR030W	DFG16	-1.7
YBR231C	SWC5	-1.7
YOR323C	PRO2	-1.7
YDR335W	MSN5	-1.7
YPL120W	VPS30	-1.7
YGR133W	PEX4	-1.7
YJL155C	FBP26	-1.7
YDR270W	CCC2	-1.7
YJL027C		-1.6
YMR214W	SCJ1	-1.6

ORF	Gene	Log <sub>2</sub> fitness
YDR389W	SAC7	-1.6
YDL100C	ARR4	-1.6
YML041C	VPS71	-1.6
YDR295C	HDA2	-1.6
YGR184C	UBR1	-1.6
YBR288C	APM3	-1.6
YLR111W		-1.6
YMR216C	SKY1	-1.6
YER040W	GLN3	-1.6
YGL066W	SGF73	-1.6
YDR276C	PMP3	-1.6
YGL007W		-1.5
YBR227C	MCX1	-1.5
YJL179W	PFD1	-1.5
YGR270W	YTA7	-1.5
YIL005W	EPS1	-1.5
YNR051C	BRE5	-1.5
YNR005C		-1.5
YIL077C		-1.5
YGR206W		-1.5
YNL084C	END3	-1.5
YHR031C	RRM3	-1.5
YFR010W	UBP6	-1.5
<i>YHR17</i> 9W	OYE2	-1.5
YER151C	UBP3	-1.5
YNL097C	PHO23	-1.5
YPR179C	HDA3	-1.5
YIL153W	RRD1	-1.5
YDR244W	PEX5	-1.5
YDR098C	GRX3	-1.4
YPL055C	LGE1	-1.4
YPL195W	APL5	-1.4
YOL044W	PEX15	-1.4
YIL041W		-1.4
YER084W		-1.4
YKL216W	URA1	-1.4
YMR263W	SAP30	-1.4
YLR110C	CCW12	-1.4
YPL154C	PEP4	-1.4
YKR042W	UTH1	-1.4
YNL323W	LEM3	-1.4
YGR182C		-1.4
YBR290W	BSD2	-1.4
YNL329C	PEX6	-1.3

ORF	Gene	Log <sub>2</sub> fitness
YHR206W	SKN7	-1.3
YEL037C	RAD23	-1.3
YJL164C	TPK1	-1.3
YBR103W	SIF2	-1.3
YJL130C	URA2	-1.3
YER073W	ALD5	-1.3
YDR162C	NBP2	-1.3
YBR105C	VID24	-1.3
YJL209W	CBP1	-1.3
YIR009W	MSL1	-1.3
YGL012W	ERG4	-1.3
YDR149C	NUM1	-1.2
YFL049W		-1.2
YCR050C		-1.2
YJR043C	POL32	-1.2
YHR004C	NEM1	-1.2
YLR087C	CSF1	-1.2
YLR056W	ERG3	-1.2
YLR204W	QRI5	-1.2
YBR174C		-1.2
YDL077C	VAM6	-1.2
YER019W	ISC1	-1.2
YOR297C	TIM18	-1.2
YDR254W	CHL4	-1.2
YGR092W	DBF2	-1.2
YGL194C	HOS2	-1.2
YOR002W	ALG6	-1.2
YOL096C	COQ3	-1.2
YMR219W	ESC1	-1.2
YPL265W	DIP5	-1.2
YCR065W	HCM1	-1.2
YJR120W		-1.2
YCR087W		-1.2
YDL052C	SLC1	-1.2
YGR252W	GCN5	-1.2
YPR070W	MED1	-1.2
YLR238W	FAR10	-1.2
YER093C	TSC11	-1.1
YGL054C	ERV14	-1.1
YNL016W	PUB1	-1.1
YEL031W	SPF1	-1.1
<i>YMR099C</i>		-1.1
YKL126W	YPK1	-1.1
YDR297W	SUR2	-1.1

ORF	Gene	Log <sub>2</sub> fitness
YDR393W	SHE9	-1.1
YJL166W	QCR8	-1.1
YGR181W	TIM13	-1.1
YHR204W	MNL1	-1.1
YLR360W	VPS38	-1.1
YJL185C		-1.1
YDR469W	SDC1	-1.1
YLR330W	CHS5	-1.1
YIL097W	FYV10	-1.1
YDL074C	BRE1	-1.1
YOL004W	SIN3	-1.1
YPR124W	CTR1	-1.1
YDR495C	VPS3	-1.1
YCR087C-A		-1.1
YMR052C-A		-1.1
YFL025C	BST1	-1.1
YOR106W	VAM3	-1.1
YKL046C	DCW1	-1.1
YLR268W	SEC22	-1.1
YKR094C	RPL40B	-1.1
YOR360C	PDE2	-1.1
YPL138C	SPP1	-1.1
YOR069W	VPS5	-1.1
YCL064C	CHA1	-1.0
YDL041W		-1.0
YGL025C	PGD1	-1.0
YLR015W	BRE2	-1.0
YOR140W	SFL1	-1.0
YPL178W	CBC2	-1.0
YBR291C	CTP1	-1.0
YMR070W	МОТ3	-1.0
YML097C	VPS9	-1.0
YPL270W	MDL2	-1.0
YBR195C	MSI1	-1.0
YJL149W		-1.0
YOL012C	HTZ1	-1.0
YOL018C	TLG2	-1.0
YIR034C	LYS1	-1.0
YOR043W	WHI2	-1.0
YGR132C	PHB1	-1.0
YCL010C	SGF29	-1.0
YLR420W	URA4	-1.0
YPR052C	NHP6A	-1.0
YHR077C	NMD2	-1.0

ORF	Gene	Log <sub>2</sub> fitness
YER007C-A		-1.0
YDR435C	PPM1	-1.0
YDL076C	RXT3	-1.0
YIL029C		-1.0
YBL039C	URA7	-1.0
YDR485C	VPS72	-1.0
YGL250W		-1.0
YCR007C		-1.0
YNL001W	DOM34	-1.0
YDR314C		-1.0
YPR089W		-1.0
YPL144W		-1.0
YCR045C		-0.9
YDR120C	TRM1	-0.9
YMR311C	GLC8	-0.9
YHR012W	VPS29	-0.9
<i>YGR171C</i>	MSM1	-0.9
YOR139C		-0.9
YER087C-A		-0.9
YLR292C	SEC72	-0.9
YIL038C	NOT3	-0.9
YJL124C	LSM1	-0.9
YJL154C	VPS35	-0.9
YER031C	YPT31	-0.9
YOR039W	CKB2	-0.9
YEL064C	AVT2	-0.9
YKL220C	FRE2	-0.9
YOR068C	VAM10	-0.9
YOR191W	RIS1	-0.9
YDL229W	SSB1	-0.9
YJL206C		-0.9
YOR366W		-0.9
YNL206C	RTT106	-0.9
YDR395W	SXM1	-0.9
YNL107W	YAF9	-0.9
YKL053C-A	MDM35	-0.9
YNL299W	TRF5	-0.9
YKR077W		-0.9
YPL213W	LEA1	-0.9
YMR246W	FAA4	-0.9
YOR014W	RTS1	-0.9
YMR135C	GID8	-0.8
YJR060W	CBF1	-0.8
YGR261C	APL6	-0.8

ORF	Gene	Log <sub>2</sub> fitness
YDL240W	LRG1	-0.8
YNR032W	PPG1	-0.8
YOR025W	HST3	-0.8
YER032W	FIR1	-0.8
YBR106W	PHO88	-0.8
YGR135W	PRE9	-0.8
YPR083W	MDM36	-0.8
YLR133W	CKI1	-0.8
YDR005C	MAF1	-0.8
YLR213C	CRR1	-0.8
YOL115W	TRF4	-0.8
YLR451W	LEU3	-0.8
YJL145W	SFH5	-0.8
YOR085W	OST3	-0.8
YDR143C	SAN1	-0.8
YDR537C		-0.8
YGL253W	HXK2	-0.8
YDR363W	ESC2	-0.8
YOL020W	TAT2	-0.8
YIL002C	INP51	-0.8
YOR379C		-0.8
YOL064C	MET22	-0.8
YDL234C	GYP7	-0.8
YEL062W	NPR2	-0.8
YKR035W-A	DID2	-0.8
YDR075W	РРН3	-0.7
YDL167C	NRP1	-0.7
<i>YMR291W</i>		-0.7
YJR117W	STE24	-0.7
YER075C	PTP3	-0.7
YMR052W	FAR3	-0.7
YER019C-A	SBH2	-0.7
YMR123W	PKR1	-0.7
YJL217W		-0.7
YDR391C		-0.7
YHL037C		-0.7
YBR101C	FES1	-0.7
YLR036C		-0.7
YBL051C	PIN4	-0.7
YHL042W		-0.7
YBR089C-A	NHP6B	-0.7
YLR126C		-0.7
YBR208C	DUR1,2	-0.7
YIL039W		-0.7

YIL053W         RHR2           YOR322C         YIL016W         SNL1           YDL091C         UBX3           YEL056W         HAT2           YHR153C         SP016           YHL014C         YLF2           YLL001W         DNM1           YHR017W         YSC83           YOR345C         YPL137C           YEL060C         PRB1           YOR008C-A         YDR035W           YMR276W         DSK2           YNL105W         GPD1 -           YDL023C         overlap           YJL215C         YOL027C           MDM38         YMR274C           RCE1	-0.6 -0.6 -0.6 -0.6 -0.6 -0.6 -0.6 -0.6
YIL016W         SNL1           YDL091C         UBX3           YEL056W         HAT2           YHR153C         SP016           YHL014C         YLF2           YLL001W         DNM1           YHR017W         YSC83           YOR345C         YPL137C           YEL060C         PRB1           YOR008C-A         YDR035W           YMR276W         DSK2           YNL105W         GPD1 -           YJL215C         YOL027C           MDM38         YMR274C           RCE1	-0.6 -0.6 -0.6 -0.6 -0.6 -0.6 -0.6 -0.6 -0.6
YDL091C         UBX3           YEL056W         HAT2           YHR153C         SP016           YHL014C         YLF2           YLL001W         DNM1           YHR017W         YSC83           YOR345C         YPL137C           YEL060C         PRB1           YOR008C-A         YDR035W           YMR276W         DSK2           YNL105W         GPD1 - overlap           YJL215C         YOL027C           MDM38         YMR274C           RCE1	-0.6 -0.6 -0.6 -0.6 -0.6 -0.6 -0.6
YEL056W         HAT2           YHR153C         SP016           YHL014C         YLF2           YLL001W         DNM1           YHR017W         YSC83           YOR345C         YPL137C           YEL060C         PRB1           YOR008C-A         YDR035W           YMR276W         DSK2           YNL105W         GPD1 - overlap           YJL215C         YOL027C           MDM38         YMR274C           RCE1	-0.6 -0.6 -0.6 -0.6 -0.6 -0.6
YHR153C         SP016           YHL014C         YLF2           YLL001W         DNM1           YHR017W         YSC83           YOR345C         YPL137C           YEL060C         PRB1           YOR008C-A         YDR035W           YMR276W         DSK2           YNL105W         GPD1 - overlap           YJL215C         YOL027C           MDM38         YMR274C           RCE1	-0.6 -0.6 -0.6 -0.6 -0.6 -0.6
YHL014C         YLF2           YLL001W         DNM1           YHR017W         YSC83           YOR345C         YPL137C           YEL060C         PRB1           YOR008C-A         YDR035W           YMR276W         DSK2           YNL105W         GPD1 - overlap           YJL215C         YOL027C           YMR274C         RCE1	-0.6 -0.6 -0.6 -0.6 -0.6
YLL001W         DNM1           YHR017W         YSC83           YOR345C         YPL137C           YEL060C         PRB1           YOR008C-A         YDR035W           YMR276W         DSK2           YNL105W         GPD1 - overlap           YJL215C         YOL027C           YMR274C         RCE1	-0.6 -0.6 -0.6 -0.6
YHR017W         YSC83           YOR345C         YPL137C           YEL060C         PRB1           YOR008C-A         YDR035W           YMR276W         DSK2           YNL105W         GPD1 - overlap           YJL215C         YOL027C           YMR274C         RCE1	-0.6 -0.6 -0.6
YOR345C           YPL137C           YEL060C         PRB1           YOR008C-A           YDR035W         ARO3           YMR276W         DSK2           YNL105W         GPD1 - overlap           YJL215C         YOL027C         MDM38           YMR274C         RCE1	-0.6 -0.6
YPL137C           YEL060C         PRB1           YOR008C-A         ARO3           YDR035W         ARO3           YMR276W         DSK2           YNL105W         GPD1 - overlap           YJL215C         YOL027C         MDM38           YMR274C         RCE1	-0.6
YEL060C         PRB1           YOR008C-A         PRB1           YDR035W         ARO3           YMR276W         DSK2           YNL105W         GPD1 - overlap           YJL215C         YOL027C         MDM38           YMR274C         RCE1	
YOR008C-A           YDR035W         ARO3           YMR276W         DSK2           YNL105W           GPD1 -           YDL023C         overlap           YJL215C           YOL027C         MDM38           YMR274C         RCE1	-0.6
YDR035W         ARO3           YMR276W         DSK2           YNL105W         GPD1 - overlap           YJL215C         YOL027C         MDM38           YMR274C         RCE1	
YMR276W         DSK2           YNL105W         GPD1 -           YDL023C         overlap           YJL215C         YOL027C         MDM38           YMR274C         RCE1	-0.6
YNL105W         GPD1 -           YDL023C         overlap           YJL215C         YOL027C         MDM38           YMR274C         RCE1	-0.6
YDL023C GPD1 - overlap YJL215C YOL027C MDM38 YMR274C RCE1	-0.6
YDL023C         overlap           YJL215C         YOL027C           YMR274C         RCE1	-0.6
YJL215C           YOL027C         MDM38           YMR274C         RCE1	
YOL027C MDM38 YMR274C RCE1	-0.6
YMR274C RCE1	-0.5
	-0.5
VIII 0 40 C 4 B 1 1 1	-0.5
YHL040C ARN1	-0.5
YHR104W GRE3	-0.5
YNL104C LEU4	-0.4
YOR005C DNL4	-0.4
YOR059C	-0.4
YPL110C	-0.7
YLR131C ACE2	-0.4

YDR457W	TOM1	3.4
YFR036W	CDC26	2.3
YDR121W	DPB4	2.2
YGL136C	MRM2	2.2
YGR220C	MRPL9	2.0
YGR102C		1.9
YGL072C		1.9
YPR166C	MRP2	1.8
YOR158W	PET123	1.7
YBL038W	MRPL16	1.7
YLR368W	MDM30	1.7
YDR363W-A	SEM1	1.6
YOR295W	UAF30	1.6
YBR278W	DPB3	1.6
YJL023C	PET130	1.6

ORF	Gene	Log <sub>2</sub> fitness
YER110C	KAP123	1.5
YKR092C	SRP40	1.5
YCR028C	FEN2	1.5
YER017C	AFG3	1.5
YJR050W	ISY1	1.4
YHR167W	THP2	1.4
YDR237W	MRPL7	1.4
YML094C-A		1.4
YGL064C	MRH4	1.4
YER139C		1.4
YBR078W	ECM33	1.3
YCR051W		1.3
YCR003W	MRPL32	1.3
YKL056C		1.3
YIR005W	IST3	1.3
YPR087W	VPS69	1.3
YJR139C	НОМ6	1.2
YKL074C	MUD2	1.2
YOR141C	ARP8	1.2
YOR182C	RPS30B	1.2
YNL215W	IES2	1.2
YOL039W	RPP2A	1.2
YLL045C	RPL8B	1.2
YGR078C	PAC10	1.2
YGR192C	TDH3	1.2
YML122C		1.2
YNR037C	RSM19	1.2
YER002W	NOP16	1.2
YER153C	PET122	1.2
YHR134W	WSS1	1.2
YDR156W	RPA14	1.2
YOR150W	MRPL23	1.2
YLR450W	HMG2	1.1
YDR447C	RPS17B	1.1
YER092W	IES5	1.1
YFR032C-A	RPL29	1.1
YLR373C	VID22	1.1
YKL110C	KTI12	1.1
YDR101C	ARX1	1.1
YNL198C		1.1
YDL002C	NHP10	1.1
YGR233C	PHO81	1.1
YDL059C	RAD59	1.1
YER156C		1.1

ORF	Gene	Log <sub>2</sub> fitness
YLL044W		1.1
YNL025C	SSN8	1.1
YLR315W	NKP2	1.1
YLR032W	RAD5	1.1
YGL149W		1.1
YPR057W	BRR1	1.0
YOR349W	CIN1	1.0
YLR304C	ACO1	1.0
YKR048C	NAP1	1.0
YMR269W		1.0
YDR385W	EFT2	1.0
YOR235W		1.0
YLR221C	RSA3	1.0
YOR189W	IES4	1.0
YLR344W	RPL26A	1.0
YGL060W	YBP2	1.0
YGR034W	RPL26B	1.0
YNR032C-A	HUB1	1.0
YPL158C		1.0
YNL096C	RPS7B	1.0
YGR076C	MRPL25	1.0
YFR031C	SMC2	1.0
YPL241C	CIN2	1.0
YNL071W	LAT1	0.9
YKR072C	SIS2	0.9
YJR077C	MIR1	0.9
<i>YDR179C</i>	CSN9	0.9
YKL138C	MRPL31	0.9
YBR246W		0.9
YPL104W	MSD1	0.9
YIL103W	DPH1	0.9
YNR042W		0.9
YNL248C	RPA49	0.9
YFL013W-A		0.9
YNL056W		0.9
YOR230W	WTM1	0.9
YKL008C	LAC1	0.9
YDR442W	SSN2*	0.9
YOR330C	MIP1	0.8
YMR207C	HFA1	0.8
YIL121W	QDR2	0.8
YIL101C	XBP1	0.8
YHR057C	CPR2	0.8
YOR027W	ST11	0.8

ORF	Gene	Log <sub>2</sub> fitness
YJR097W	JJJ3	0.8
YPL202C	AFT2	0.8
YGR035C		0.8
YKR074W		0.8
YLL006W	MMM1	0.8
YDR399W	HPT1	0.8
YBL027W	RPL19B	0.8
YPL239W	YAR1	0.7
YJL093C	TOK1	0.7
YDR414C	ERD1	0.7
YCR066W	RAD18	0.7
YIL112W	HOS4	0.7
YIL043C	CBR1	0.7
YBR277C		0.7
YDR403W	DIT1	0.7
YLR233C	EST1	0.7
YBL080C	PET112	0.7
YDR072C	IPT1	0.7
YGR118W	RPS23A	0.7
YKL087C	CYT2	0.7
YGR228W		0.7
YJL192C	SOP4	0.7
YDL106C	PHO2	0.6
YKR047W		0.6
YNL183C	NPR1	0.6
YHR094C	HXT1	0.6
YDR431W		0.6
YCR015C		0.6
YBR031W	RPL4A	0.6
YNL285W		0.6
YDR490C	PKH1	0.6
YOR327C	SNC2	0.6
YKL068W	NUP100	0.6
YOL079W		0.6
YML107C		0.6
YPL172C	COX10	0.5
YCR008W	SAT4	0.5
YDR493W		0.5
YIL069C	RPS24B	0.5
YOL070C		0.5
YNR067C	DSE4	0.4
YPL057C	SUR1	0.4
YHR108W	GGA2	0.4
YGR221C	TOS2	0.3