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Saccharomyces cerevisiae genes involved in survival of heat shock

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File S1

Data from the heat-shock screens

Gene lists are provided for non-essential genes that when deleted lead to increased or decreased resistance to 50°. Data are separately provided for cells in exponential and stationary phase. The essential gene data were obtained from the analysis of heterozygous diploids. The extent of resistance is indicated by numbers from 1 to 4 with 4 being the greatest, and for sensitivity from -1 to -4 with -4 being most sensitive.

File S1 is available for download at http://www.g3journal.org/lookup/suppl/doi:10.1534/g3.113.007971/-/DC1

File S2

Genes that when deleted affect heat-shock resistance or sensitivity that overlap with those whose expression is altered by heat shock

Heat-shock transcript data were those of Gasch *et al.*, 2000 for a heat shock protocol using addition of prewarmed medium for a shift from 25° to 37°; data from the 20 minute time sample. Summary table of percentage overlap for genes in each category is given below.

File S2 is available for download at http://www.g3journal.org/lookup/suppl/doi:10.1534/g3.113.007971/-/DC1.

Table S1 Overlap between deletion mutants affected in heat shock, and those involved in cell death as identified by Tang *et al.* (2011)

Genes listed are those identified by *Tang et al.* (2011), which when deleted lead to a similar altered resistance to heat ramp and acetic acid treatments. Those in red were not found in the heat shock resistance screen of either exponential or stationary phase cells. Overlap is 18 from 88 total genes (20% overlap)

CLN3
SSA2
EMC6
CNE1
ERP2 but ERP4
BDH1
FUN14
YAR023C
SPO7
YLL032C
UIP3
NTG1
ENT4
YEH1
BUD14 but BUD7,19,20,23 and 31
YAR028W
YLL017W
FUN30
UBI4
KNS1
SNC1
DNM1
GCV3
YAR044W
YAL037W
CCR4
NUP60
MYO4
AIM1
SPA2
POM33
BDH2
FLC2
BPT1
SDC25
ERV46
DRS2
PEX22
GDH3
KIN3
FRA1
FUN19
SWC3
GEM1
YAL043C−a
PMT2
FUN26
PUF3
IRC19
YAL065C
PRM9
RTT109
ATS1
SEO1
SAW1
PAU17
CYC3
ADE1 but ADE5,6,8
DEP1
YAR040C
MMM1
SPO75
MDM10
SWH1
PAU8
YAL018C
FRT2
AIM2
YAT1
PSR1
SWD1
COX17 (plus COX6,16,20,23)
PAU7
TPO1
OAF1
RBG1
VPS8 (plus VPS4,9,13,20,25,27,28,30,41,54,69,74)
GIP4
HSP104
SYN8
YAR043C
FUN12
PSK1
ECM1
GPB2 but GPB1
YAR037W
YAR029W
SSA1 but SSA2

Table S2 Percentage of genes identified in the heat-shock screens that also had >two-fold difference in expression from the Gasch *et al.* (2000) microarray data for "heat shock 20 minutes protocol hs-1".

	Exponential Sensitive	Exponential Resistant	Stationary Sensitive	Stationary Resistant
Non Essential	29.5 (93/315)	30.7 (31/101)	20.8 (42/201)	33.3 (105/314)
Essential	37.1 (13/35)	58.5 (24 /41)	38.9 (7/18)	37.5 (6/16)

Figures in parentheses indicate the total number of deletants in each category