

Strain	Description of deleted gene	dieldrin IC30 (690 μ M)		p-value to WT	dieldrin IC30 (690 μ M) + 5mM leucine		p-value to no leucine	Human homolog of deleted gene
		Ratio	SEM		Ratio	SEM		
<i>Kinases and phosphatases</i>								
oca1Δ	Tyrosine phosphatase	0.389	0.043	***	0.884	0.042	**	
ssk2Δ	MAPKKK of the HOG1 mitogen-activated signaling pathway	0.787	0.007	***	0.949	0.016	***	MAP3K4
ssk1Δ	Cytoplasmic response regulator	0.854	0.014	***	0.990	0.037	*	
cka1Δ	Alpha catalytic subunit of casein kinase 2	0.888	0.004	***	ND	ND	NA	CSNK2A1
gcn2Δ	Protein kinase; initiates starvation response	0.907	0.054	NS	1.203	0.046	*	EIF2AK4
ptc6Δ	Mitochondrial type 2C protein phosphatase	0.909	0.021	**	ND	ND	NA	PPM1K
<i>Downstream of Tor</i>								
sap155Δ	Required for function of the Sit4p protein phosphatase	0.927	0.022	*	0.915	0.027	NS	PPP6R1
sit4Δ	Type 2A-related serine-threonine phosphatase	0.957	0.020	NS	0.957	0.022	NS	PPP6
sap4Δ	Required for function of the Sit4p protein phosphatase	1.036	0.017	NS	1.007	0.019	NS	
<i>Transcription activators/repressors</i>								
imp2Δ	Transcriptional activator; maintains ion homeostasis	0.373	0.091	**	ND	ND	NA	
spt8Δ	Subunit of the SAGA transcriptional regulatory complex	0.470	0.016	***	0.825	0.017	***	
mot3Δ	Transcriptional repressor	0.633	0.015	***	ND	ND	NA	
gat1Δ	Transcriptional activator for nitrogen catabolite repression genes	1.027	0.013	NS	0.9833	0.019	NS	
<i>Autophagy (48H treatment)</i>								
atg13Δ	Required for vesicle formation during autophagy	0.933	0.023	*	0.947	0.026	NS	ATG13
atg12Δ	Ubiquitin-like modifier involved in autophagy and Cvt pathway	0.993	0.015	NS	1.023	0.034	NS	APG12
atg5Δ	Involved in autophagy and the Cvt pathway	1.010	0.012	NS	0.987	0.023	NS	ATG5
<i>Other</i>								
pdr5Δ	Multidrug transporter	0.314	0.040	***	0.486	0.037	*	ABCG2
opi3Δ	Phospholipid methyltransferase	0.711	0.045	**	ND	ND	NA	PEMT
bre5Δ	Ubiquitin protease cofactor	0.714	0.030	***	ND	ND	NA	
ufd2Δ	Ubiquitin chain assembly factor (E4)	0.746	0.061	*	ND	ND	NA	UBE4B
yen1Δ	Holliday junction resolvase	0.754	0.027	***	ND	ND	NA	GEN1
sac3Δ	Nuclear pore-associated protein	0.757	0.035	**	ND	ND	NA	MCM3AP
tim18Δ	Component of the mitochondrial TIM22 complex	0.775	0.024	***	ND	ND	NA	
par32Δ	Unknown function; phosphorylated upon rapamycin treatment	0.787	0.062	*	ND	ND	NA	
cnb1Δ	Calcineurin B; the regulatory subunit of calcineurin	0.913	0.008	**	0.908	0.016	NS	PPP3R1
thi3Δ	Role in branched chain amino acid degradation	0.941	0.014	**	ND	ND	NA	HACL1
pda1Δ	E1 alpha subunit of the pyruvate dehydrogenase complex	0.969	0.028	NS	ND	ND	NA	PDHA1

Table S2. Confirming dieldrin sensitivity for various strains by flow cytometry. A list of strains not shown in the main text that were tested for sensitivity to dieldrin. Ratios are defined as relative growth to a wild-type GFP strain between treated and control cultures. Statistically significant differences between wild-type and mutant strains as well as non-leucine and leucine treated strains were determined by Student's t-test, where ***= $p < 0.001$, **= $p < 0.01$, and *= $p < 0.05$. ND=not determined, NA=not applicable, NS=not significant.

Gaytán *et al.* Functional profiling discovers that the dieldrin organochlorinated pesticide affects leucine availability in yeast.