

Supplementary Material for:

## **Carbon Catabolite Repression in Yeast is Not Limited to Glucose**

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**Table S1. Yeast Strains used in this study.**

All yeast strains are derived from BY4741 *MATa his3Δ1, leu2Δ0, ura3Δ0, met15Δ0*.

Number	Genotype	Source
1	WT	Lab collection
2	<i>haa1::KAN</i>	Deletion collection
3	<i>hrr25::KAN</i>	Liu Z (1)
4	<i>hrr25Δ::kanMX4</i> [pRS415-HRR25(E52D)]	Liu Z (1)
5	<i>hrr25Δ::kanMX4 haa1::HIS3</i> [pRS415-HRR25(E52D)]	Liu Z (1)
6	<i>msn5::NAT</i>	This study
7	<i>haa1::KAN msn5::NAT</i>	This study
8	<i>adr1::KAN</i>	Deletion collection
9	<i>adr1::KAN haa1::HygB</i>	This study
10	<i>ady2::KAN</i>	Deletion collection
11	<i>fps1::KAN</i>	Deletion collection
12	<i>fps1::KAN ady2::HygB</i>	This study
13	<i>fps1::KAN jen1::NAT</i>	This study
14	<i>jen1::NAT</i>	This study
15	<i>ady2::KAN jen1::NAT</i>	This study
16	<i>fps1::KAN jen1::NAT ady2::HygB</i>	This study
17	<i>acs1::KAN</i>	Deletion collection
18	<i>fps1::KAN jen1::NAT ady2::HygB acs1::HIS3</i>	This study
19	<i>ald4::KAN</i>	Deletion collection
20	<i>ald5::KAN</i>	Deletion collection
21	<i>ald6::KAN</i>	Deletion collection
22	<i>ald4::KAN ald5::NAT</i>	This study
23	<i>ald4::KAN ald6::NAT</i>	This study
24	<i>ald6::KAN ald5::NAT</i>	This study
25	<i>ald4::KAN ald5::HygB ald6::NAT</i>	This study
26	<i>ald4::KAN ald6::NAT acs1::HIS3</i>	This study
27	<i>adh2::KAN</i>	Deletion collection

**Table S2. Plasmids Used in this study**

Name	Genotype	Vector/Markers	Source
prs315		LEU2	Lab collection
pBGM18	<i>prADH2::LacZ</i>	pRS316, 313 (changed by gap repair)	Elton Young (2)
YRO2-LacZ	<i>1929bp prYRO2::LacZ</i>	pRS416 URA3	Z. Liu (1)
Haa1-GFP	<i>prHAA1::HAA1-GFP</i>	pRS416 URA3	Z. Liu (1)
Adr1 <sup>S230A</sup>	<i>prADH1::ADR1<sup>S230A</sup></i>	CEN KAN LEU2 (changed from TRP1)	Elton Young (3)

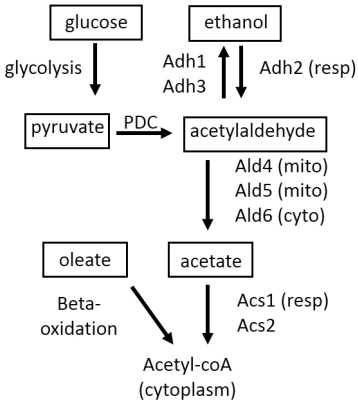
ALD6-OE	prADH1::ALD6-GFP	pRS415 LEU2	This study
ALD4-LacZ	prALD4::LacZ	yep357 2 $\mu$ URA3	J. Ariño (4)
ALD5-LacZ	prALD5::LacZ	yep357 2 $\mu$ URA3	J. Ariño (4)
ALD6-LacZ	prALD6::LacZ	yep357 2 $\mu$ URA3	J. Ariño (4)
ACS1-LacZ	prACS1::LacZ	yep357 2 $\mu$ URA3	H. Schueller (5)
ACS2-LacZ	1000bp prACS2::LacZ	Ycp50 CEN URA3	This study

1. Collins ME, Black JJ, & Liu Z (2017) Casein Kinase I Isoform Hrr25 Is a Negative Regulator of Haa1 in the Weak Acid Stress Response Pathway in *Saccharomyces cerevisiae*. *Appl Environ Microbiol* 83(13).
2. Dombek KM, Voronkova V, Raney A, & Young ET (1999) Functional analysis of the yeast Glc7-binding protein Reg1 identifies a protein phosphatase type 1-binding motif as essential for repression of ADH2 expression. (Translated from eng) *Mol Cell Biol* 19(9):6029-6040 (in eng).
3. Ratnakumar S, Kacherovsky N, Arms E, & Young ET (2009) Snf1 controls the activity of adr1 through dephosphorylation of Ser230. (Translated from eng) *Genetics* 182(3):735-745 (in eng).
4. Ruiz A, Serrano R, & Arino J (2008) Direct regulation of genes involved in glucose utilization by the calcium/calcineurin pathway. *J Biol Chem* 283(20):13923-13933.
5. Kratzer S & Schuller HJ (1995) Carbon source-dependent regulation of the acetyl-coenzyme A synthetase-encoding gene ACS1 from *Saccharomyces cerevisiae*. *Gene* 161(1):75-79.

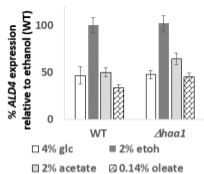
Suppl. Figure legends

**Figure S1:** Simplified diagram illustrating the metabolic pathways leading to cytoplasmic acetyl-coA, together with the carbon sources used for this work. Resp. = respiration conditions. Cyto. = cytoplasm Mito. = mitochondrial.

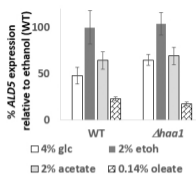
**Figure S2 a, b, c, d, e.** Cells were grown for 24 hours in 5ml of the indicated media (without dilution) and indicated gene expression measured. Expression is normalized against WT in ethanol medium. N=3. Error bars are one standard deviation .



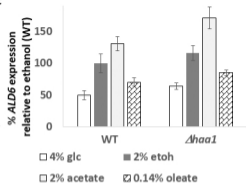
a



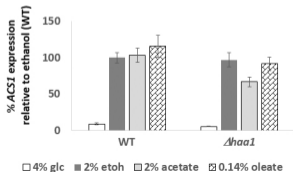
b



c



d



e

