

Table S3 - Strains

Name (Accession no.)	Relevant genotype	Reduced pathway	Origin
<b>Unreduced background</b>			
<b>CEN.PK113-7D</b>	<i>MATa ura3-52 can1Δ::cas9-natNT2</i> <i>TRP1 LEU2 HIS3</i>		(Entian and Kötter 2007)
<b>IMX581 (Y40593)</b>	<i>MATa ura3-52 can1Δ::cas9-natNT2 TRP1 LEU2</i> <i>HIS3</i>		(Mans et al. 2015)
<b>IMK588</b>	<i>MATa URA3 HIS3 LEU2 TRP1 OAC1Δ::kanMX</i>		This study
<b>IMK815</b>	<i>MATa ura3-52 HIS3 LEU2 TRP1 can1Δ::cas9-natNT2 gnd2Δ tkl2Δ sol4Δ</i>		This study
<b>IMX1592</b>	<i>MATa ura3-52 HIS3 LEU2 TRP1 can1Δ::cas9-natNT2 gnd2Δ tkl2Δ sol4Δ nqm1Δ</i>	Pentose phosphate pathway	This study
<b>IMX1694</b>	<i>MATa ura3-52 can1Δ::cas9-natNT2 TRP1 LEU2</i> <i>HIS3 pyc2Δ sdh1bΔ shh3Δ shh4Δ</i>		This study
<b>IMX1805</b>	<i>MATa ura3-52 can1Δ::cas9-natNT2 TRP1 LEU2</i> <i>HIS3 pyc2Δ sdh1bΔ shh3Δ shh4Δ cit3Δ</i>	Anaplerotic reaction and Krebs cycle	This study
<b>IMX2230</b>	<i>MATa ura3-52 HIS3 LEU2 TRP1 MAL2-8c SUC2</i> <i>can1::CAS9-nat odc1Δ odc2Δ ndt2Δ ctp1Δ</i>		This study
<b>IMX2360</b>	<i>MATa ura3-52 HIS3 LEU2 TRP1 MAL2-8c SUC2</i> <i>can1::CAS9-nat aac1Δ aac3Δ sal1Δ mpc3Δ</i>		This study
<b>IMX2391</b>	<i>MATa ura3-52 HIS3 LEU2 TRP1 MAL2-8c SUC2</i> <i>can1::CAS9-nat odc2Δ</i>		This study
<b>IMX2396</b>	<i>MATa ura3-52 HIS3 LEU2 TRP1 MAL2-8c SUC2</i> <i>can1::CAS9-nat ctp1Δ odc1Δ odc2Δ</i>		This study
<b>IMX2397</b>	<i>MATa ura3-52 HIS3 LEU2 TRP1 MAL2-8c SUC2</i> <i>can1::CAS9-nat aac1Δ aac3Δ mpc3Δ sal1Δ</i> <i>odc2Δ</i>		This study
<b>IMX2404</b>	<i>MATa ura3-52 HIS3 LEU2 TRP1 MAL2-8c SUC2</i> <i>can1::CAS9-nat ctp1Δ odc1Δ ndt2Δ</i>		This study
<b>IMX2408</b>	<i>MATa ura3-52 HIS3 LEU2 TRP1 MAL2-8c SUC2</i> <i>can1::CAS9-nat aac1Δ aac3Δ mpc3Δ sal1Δ</i> <i>ctp1Δ odc1Δ ndt2Δ</i>	Mitochondrial transporters	This study
<b>IMX2416</b>	<i>MATa ura3-52 HIS3 LEU2 TRP1 MAL2-8c SUC2</i> <i>can1::CAS9-nat aac1Δ aac3Δ mpc3Δ sal1Δ</i> <i>ctp1Δ odc1Δ odc2Δ</i>		This study
<b>IMX2508</b>	<i>MATa ura3-52 HIS3 LEU2 TRP1 MAL2-8c SUC2</i> <i>can1::CAS9-nat ctp1Δ</i>		This study
<b>IMX2527</b>	<i>MATa ura3-52 HIS3 LEU2 TRP1 MAL2-8c SUC2</i> <i>can1::CAS9-nat odc1Δ odc2Δ</i>		This study
<b>IMX2466</b>	<i>MATa ura3-52 HIS3 LEU2 TRP1 MAL2-8c SUC2</i> <i>can1::CAS9-nat frds1Δ</i>	Fumarate reductase	This study

<b>IMX2467</b>	<i>MATa ura3-52 HIS3 LEU2 TRP1 MAL2-8c SUC2 can1::CAS9-nat idp1Δ</i>		This study
<b>IMX2468</b>	<i>MATa ura3-52 HIS3 LEU2 TRP1 MAL2-8c SUC2 can1::CAS9-nat idp2Δ</i>		This study
<b>IMX2469</b>	<i>MATa ura3-52 HIS3 LEU2 TRP1 MAL2-8c SUC2 can1::CAS9-nat idp1Δ idp2Δ</i>	Glyoxylate cycle	This study
<b>IMX2470</b>	<i>MATa ura3-52 HIS3 LEU2 TRP1 MAL2-8c SUC2 can1::CAS9-nat frds1Δ idp1Δ idp2Δ</i>		This study
<b>IMX2509</b>	<i>MATa ura3-52 HIS3 LEU2 TRP1 MAL2-8c SUC2 can1::CAS9-nat ald3Δ gpd1Δ gpp2Δ</i>		This study
<b>IMX2510</b>	<i>MATa ura3-52 HIS3 LEU2 TRP1 MAL2-8c SUC2 can1::CAS9-nat ald3Δ</i>	Acetyl-CoA synthesis	This study
<b>IMX2512</b>	<i>MATa ura3-52 HIS3 LEU2 TRP1 MAL2-8c SUC2 can1::CAS9-nat ald3Δ gpd1Δ</i>		This study
<b>IMX2513</b>	<i>MATa ura3-52 HIS3 LEU2 TRP1 MAL2-8c SUC2 can1::CAS9-nat ald3Δ gpp2Δ</i>		This study
<b>IMX2612</b>	<i>MATa ura3-52 HIS3 LEU2 TRP1 MAL2-8c SUC2 can1::CAS9-nat gpd1Δ gpp2Δ</i>	Glycerol synthesis	This study
<b>Reduced background</b>			
<b>IMX370</b>	<i>MATa ura3-52 his3-1 leu2-3,112 MAL2-8c SUC2 glk1::HIS5, hxx1::LEU2, tdh1, tdh2::AB, gpm2::LoxP, gpm3, eno1, pyk2, pdc5, pdc6, adh2, adh5, adh4</i>	Glycolysis	(Solis-Escalante et al. 2015)
<b>IMX1331 (MG)</b>	<i>MATa ura3-52 his3-1 leu2-3,112 MAL2-8c SUC2 glk1::Sphis5 hxx1::KILEU2 tdh1 tdh2 gpm2 gpm3 eno1 pyk2 pdc5 pdc6 adh2 adh5 adh4 can1Δ::cas9-natNT2</i>	Glycolysis	This study
<b>IMK814</b>	<i>MATa ura3-52 his3-1 leu2-3,112 MAL2-8c SUC2 glk1::Sphis5 hxx1::KILEU2 tdh1Δ tdh2Δ gpm2Δ gpm3Δ eno1Δ pyk2Δ pdc5Δ pdc6Δ adh2Δ adh5Δ adh4Δ can1Δ::cas9-natNT2 gnd2Δ tkl2Δ sol4Δ</i>		This study
<b>IMX1591 (CCMin 1)</b>	<i>MATa ura3-52 his3-1 leu2-3,112 MAL2-8c SUC2 glk1::Sphis5 hxx1::KILEU2 tdh1Δ tdh2Δ gpm2Δ gpm3Δ eno1Δ pyk2Δ pdc5Δ pdc6Δ adh2Δ adh5Δ adh4Δ can1Δ::cas9-natNT2 gnd2Δ tkl2Δ sol4Δ nqm1Δ</i>	Pentose phosphate pathway	This study
<b>IMX1713</b>	<i>MATa ura3-52 his3-1 leu2-3,112 MAL2-8c SUC2 glk1::Sphis5 hxx1::KILEU2 tdh1Δ tdh2Δ gpm2Δ gpm3Δ eno1Δ pyk2Δ pdc5Δ pdc6Δ adh2Δ adh5Δ adh4Δ can1Δ::cas9-natNT2 gnd2Δ tkl2Δ sol4Δ nqm1Δ pyc2Δ sdh1bΔ shh3Δ shh4Δ</i>		This study
<b>IMX1806 (CCMin 2)</b>	<i>MATa ura3-52 his3-1 leu2-3,112 MAL2-8c SUC2 glk1::Sphis5 hxx1::KILEU2 tdh1Δ tdh2Δ gpm2Δ gpm3Δ eno1Δ pyk2Δ pdc5Δ pdc6Δ adh2Δ adh5Δ adh4Δ can1Δ::cas9-natNT2 gnd2Δ tkl2Δ sol4Δ nqm1Δ pyc2Δ sdh1bΔ shh3Δ shh4Δ cit3Δ</i>	Anaplerotic reaction and Krebs cycle	This study

<b>IMX1984</b>	<i>MATa ura3-52 his3-1 leu2-3,112 MAL2-8c SUC2 glk1::Sphis5 hxx1::KILEU2 tdh1Δ tdh2Δ gpm2Δ gpm3Δ eno1Δ pyk2Δ pdc5Δ pdc6Δ adh2Δ adh5Δ adh4Δ can1Δ::cas9-natNT2 gnd2Δ tkl2Δ sol4Δ nqm1Δ pyc2Δ sdh1bΔ shh3Δ shh4Δ cit3Δ aac1Δ aac3Δ sal1Δ mpc3Δ</i>		This study
<b>IMX2231</b>	<i>MATa ura3-52 his3-1 leu2-3,112 MAL2-8c SUC2 glk1::Sphis5 hxx1::KILEU2 tdh1Δ tdh2Δ gpm2Δ gpm3Δ eno1Δ pyk2Δ pdc5Δ pdc6Δ adh2Δ adh5Δ adh4Δ can1Δ::cas9-natNT2 gnd2Δ tkl2Δ sol4Δ nqm1Δ pyc2Δ sdh1bΔ shh3Δ shh4Δ cit3Δ aac1Δ aac3Δ sal1Δ mpc3Δ odc1Δ odc2Δ ndt2Δ ctp1Δ</i>		This study
<b>IMX2394</b>	<i>MATa ura3-52 his3-1 leu2-3,112 MAL2-8c SUC2 glk1::Sphis5 hxx1::KILEU2 tdh1Δ tdh2Δ gpm2Δ gpm3Δ eno1Δ pyk2Δ pdc5Δ pdc6Δ adh2Δ adh5Δ adh4Δ can1Δ::cas9-natNT2 gnd2Δ tkl2Δ sol4Δ nqm1Δ pyc2Δ sdh1bΔ shh3Δ shh4Δ cit3Δ aac1Δ aac3Δ sal1Δ mpc3Δ odc2Δ</i>		This study
<b>IMX2405</b>	<i>MATa ura3-52 his3-1 leu2-3,112 MAL2-8c SUC2 glk1::Sphis5 hxx1::KILEU2 tdh1Δ tdh2Δ gpm2Δ gpm3Δ eno1Δ pyk2Δ pdc5Δ pdc6Δ adh2Δ adh5Δ adh4Δ can1Δ::cas9-natNT2 gnd2Δ tkl2Δ sol4Δ nqm1Δ pyc2Δ sdh1bΔ shh3Δ shh4Δ cit3Δ aac1Δ aac3Δ sal1Δ mpc3Δ ctp1Δ odc1Δ</i>		This study
<b>IMX2406</b>	<i>MATa ura3-52 his3-1 leu2-3,112 MAL2-8c SUC2 glk1::Sphis5 hxx1::KILEU2 tdh1Δ tdh2Δ gpm2Δ gpm3Δ eno1Δ pyk2Δ pdc5Δ pdc6Δ adh2Δ adh5Δ adh4Δ can1Δ::cas9-natNT2 gnd2Δ tkl2Δ sol4Δ nqm1Δ pyc2Δ sdh1bΔ shh3Δ shh4Δ cit3Δ aac1Δ aac3Δ sal1Δ mpc3Δ ctp1Δ odc1Δ odc2Δ</i>		This study
<b>IMX2407 (CCMin 3)</b>	<i>MATa ura3-52 his3-1 leu2-3,112 MAL2-8c SUC2 glk1Δ::Sphis5 hxx1Δ::KILEU2 tdh1Δ tdh2Δ gpm2Δ gpm3Δ eno1Δ pyk2Δ pdc5Δ pdc6Δ adh2Δ adh5Δ adh4Δ can1Δ::cas9-natNT2 gnd2Δ tkl2Δ sol4Δ nqm1Δ pyc2Δ sdh1bΔ shh3Δ shh4Δ cit3Δ aac1Δ aac3Δ sal1Δ mpc3Δ ctp1Δ odc1Δ ndt2Δ</i>	Mitochondrial transporters	This study
<b>IMX2471</b>	<i>MATa ura3-52 his3-1 leu2-3,112 MAL2-8c SUC2 glk1Δ::Sphis5 hxx1Δ::KILEU2 tdh1Δ tdh2Δ gpm2Δ gpm3Δ eno1Δ pyk2Δ pdc5Δ pdc6Δ adh2Δ adh5Δ adh4Δ can1Δ::cas9-natNT2 gnd2Δ tkl2Δ sol4Δ nqm1Δ pyc2Δ sdh1bΔ shh3Δ shh4Δ cit3Δ aac1Δ aac3Δ sal1Δ mpc3Δ ctp1Δ odc1Δ ndt2Δ frds1Δ</i>	Fumarate reductase	This study
<b>IMX2472</b>	<i>MATa ura3-52 his3-1 leu2-3,112 MAL2-8c SUC2 glk1Δ::Sphis5 hxx1Δ::KILEU2 tdh1Δ tdh2Δ gpm2Δ gpm3Δ eno1Δ pyk2Δ pdc5Δ pdc6Δ adh2Δ adh5Δ adh4Δ can1Δ::cas9-natNT2 gnd2Δ</i>		This study

	<i>tkl2Δ sol4Δ nqm1Δ pyc2Δ sdh1bΔ shh3Δ shh4Δ cit3Δ aac1Δ aac3Δ sal1Δ mpc3Δ ctp1Δ odc1Δ ndt2Δ idp1Δ</i>		
<b>IMX2473</b>	<i>MATa ura3-52 his3-1 leu2-3,112 MAL2-8c SUC2 glk1Δ::Sphis5 hxx1Δ::KILEU2 tdh1Δ tdh2Δ gpm2Δ gpm3Δ eno1Δ pyk2Δ pdc5Δ pdc6Δ adh2Δ adh5Δ adh4Δ can1Δ::cas9-natNT2 gnd2Δ tkl2Δ sol4Δ nqm1Δ pyc2Δ sdh1bΔ shh3Δ shh4Δ cit3Δ aac1Δ aac3Δ sal1Δ mpc3Δ ctp1Δ odc1Δ ndt2Δ idp2Δ</i>		This study
<b>IMX2474</b>	<i>MATa ura3-52 his3-1 leu2-3,112 MAL2-8c SUC2 glk1Δ::Sphis5 hxx1Δ::KILEU2 tdh1Δ tdh2Δ gpm2Δ gpm3Δ eno1Δ pyk2Δ pdc5Δ pdc6Δ adh2Δ adh5Δ adh4Δ can1Δ::cas9-natNT2 gnd2Δ tkl2Δ sol4Δ nqm1Δ pyc2Δ sdh1bΔ shh3Δ shh4Δ cit3Δ aac1Δ aac3Δ sal1Δ mpc3Δ ctp1Δ odc1Δ ndt2Δ idp1Δ idp2Δ</i>		This study
<b>IMX2475 (CCMin 4)</b>	<i>MATa ura3-52 his3-1 leu2-3,112 MAL2-8c SUC2 glk1Δ::Sphis5 hxx1Δ::KILEU2 tdh1Δ tdh2Δ gpm2Δ gpm3Δ eno1Δ pyk2Δ pdc5Δ pdc6Δ adh2Δ adh5Δ adh4Δ can1Δ::cas9-natNT2 gnd2Δ tkl2Δ sol4Δ nqm1Δ pyc2Δ sdh1bΔ shh3Δ shh4Δ cit3Δ aac1Δ aac3Δ sal1Δ mpc3Δ ctp1Δ odc1Δ ndt2Δ frds1Δ idp1Δ idp2Δ</i>	Glyoxylate cycle	This study
<b>IMX2511</b>	<i>MATa ura3-52 his3-1 leu2-3,112 MAL2-8c SUC2 glk1Δ::Sphis5 hxx1Δ::KILEU2 tdh1Δ tdh2Δ gpm2Δ gpm3Δ eno1Δ pyk2Δ pdc5Δ pdc6Δ adh2Δ adh5Δ adh4Δ can1Δ::cas9-natNT2 gnd2Δ tkl2Δ sol4Δ nqm1Δ pyc2Δ sdh1bΔ shh3Δ shh4Δ cit3Δ aac1Δ aac3Δ sal1Δ mpc3Δ ctp1Δ odc1Δ ndt2Δ frds1Δ idp1Δ idp2Δ ald3Δ</i>	Acetyl-Coa synthesis	This study
<b>IMX2519 (CCMin 5)</b>	<i>MATa ura3-52 his3-1 leu2-3,112 MAL2-8c SUC2 glk1Δ::Sphis5 hxx1Δ::KILEU2 tdh1Δ tdh2Δ gpm2Δ gpm3Δ eno1Δ pyk2Δ pdc5Δ pdc6Δ adh2Δ adh5Δ adh4Δ can1Δ::cas9-natNT2 gnd2Δ tkl2Δ sol4Δ nqm1Δ pyc2Δ sdh1bΔ shh3Δ shh4Δ cit3Δ aac1Δ aac3Δ sal1Δ mpc3Δ ctp1Δ odc1Δ ndt2Δ frds1Δ idp1Δ idp2Δ ald3Δ gpd1Δ gpp2Δ</i>	Glycerol synthesis	This study
<b>IMX2520</b>	<i>MATa ura3-52 his3-1 leu2-3,112 MAL2-8c SUC2 glk1Δ::Sphis5 hxx1Δ::KILEU2 tdh1Δ tdh2Δ gpm2Δ gpm3Δ eno1Δ pyk2Δ pdc5Δ pdc6Δ adh2Δ adh5Δ adh4Δ can1Δ::cas9-natNT2 gnd2Δ tkl2Δ sol4Δ nqm1Δ pyc2Δ sdh1bΔ shh3Δ shh4Δ cit3Δ aac1Δ aac3Δ sal1Δ mpc3Δ ctp1Δ odc1Δ ndt2Δ frds1Δ idp1Δ idp2Δ ald3Δ gpd1Δ</i>		This study
<b>IMX2521</b>	<i>MATa ura3-52 his3-1 leu2-3,112 MAL2-8c SUC2 glk1Δ::Sphis5 hxx1Δ::KILEU2 tdh1Δ tdh2Δ gpm2Δ gpm3Δ eno1Δ pyk2Δ pdc5Δ pdc6Δ</i>		This study

	<i>adh2Δ adh5Δ adh4Δ can1Δ::cas9-natNT2 gnd2Δ tkl2Δ sol4Δ nqm1Δ pyc2Δ sdh1bΔ shh3Δ shh4Δ cit3Δ aac1Δ aac3Δ sal1Δ mpc3Δ ctp1Δ odc1Δ ndt2Δ frds1Δ idp1Δ idp2Δ ald3Δ gpp2Δ</i>	
<b>IMX2538 (minimal strain)</b>	<i>MATa ura3-52 his3-1 leu2-3,112 MAL2-8c SUC2 glk1Δ::Sphis5 hxk1Δ::KILEU2 tdh1Δ tdh2Δ gpm2Δ gpm3Δ eno1Δ pyk2Δ pdc5Δ pdc6Δ adh2Δ adh5Δ adh4Δ can1Δ::cas9-natNT2 gnd2Δ tkl2Δ sol4Δ nqm1Δ pyc2Δ sdh1bΔ shh3Δ shh4Δ cit3Δ aac1Δ aac3Δ sal1Δ mpc3Δ ctp1Δ odc1Δ ndt2Δ frds1Δ idp1Δ idp2Δ ald3Δ gpd1Δ gpp2Δ::URA3</i>	This study
<b>IMX2640</b>	<i>MATa ura3-52 his3-1 leu2-3,112 MAL2-8c SUC2 glk1::Sphis5 hxk1::KILEU2 tdh1Δ tdh2Δ gpm2Δ gpm3Δ eno1Δ pyk2Δ pdc5Δ pdc6Δ adh2Δ adh5Δ adh4Δ can1Δ::cas9-natNT2 gnd2Δ tkl2Δ sol4Δ nqm1Δ pyc2Δ sdh1bΔ shh3Δ shh4Δ cit3Δ aac1Δ aac3Δ sal1Δ mpc3Δ X2::pMPC3-MPC3-tMPC3</i>	This study
<b>IMX2641</b>	<i>MATa ura3-52 his3-1 leu2-3,112 MAL2-8c SUC2 glk1Δ::Sphis5 hxk1Δ::KILEU2 tdh1Δ tdh2Δ gpm2Δ gpm3Δ eno1Δ pyk2Δ pdc5Δ pdc6Δ adh2Δ adh5Δ adh4Δ can1Δ::cas9-natNT2 gnd2Δ tkl2Δ sol4Δ nqm1Δ pyc2Δ sdh1bΔ shh3Δ shh4Δ cit3Δ aac1Δ aac3Δ sal1Δ mpc3Δ ctp1Δ odc1Δ ndt2Δ frds1Δ idp1Δ idp2Δ ald3Δ gpd1Δ gpp2Δ X2::pMPC3-MPC3-tMPC3</i>	This study

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