

SUPPLEMENTARY TABLE II. Comparison of over-represented functional clusters of genes and protein levels from MLY132 *gpa2Δ* YPM vs SLAM ($p < 0.01$). Red highlighting indicates common change with WT strain. 0 = Ratio metric change of iTRAQ-generated differentially expressed proteins.

Common biological process	Down-regulated genes	Decreased protein level	Up-regulated genes	Increased protein level
Cellular organization and biogenesis				
Ribosome biogenesis/assembly				
rRNA processing				
processing 20S pre-RNA				
processing 35S primary transcript				
ribosome assembly maintenance				
	ARX1 CBF5 C1C1 DBP10 DBP3 DBP6 DBP7 DBP9 DIM1 DIP2 DRS1 EBP2 EMG1 ENP1 ENP2 ERB1 FALI GARI GSP1 HAS1 IMP3 IMP4 IPI3 KRRI KRRI LSG1 MAK16 MAK21 MRT4 MTR3 NANI NHP2 NIP7 NMD3 NOC2 NOC4 NOG1 NOG2 NOP1 NOP14 NOP15 NOP2 NOP58 NOP6 NOP7 NOP9 NS41 NS42 NSRI NUG1 PWP1 PWP2 RCL1 RIO2 RIX1 RIX7 RLII RLP24 RLP7 ROKI RPL2 RPL11A RPL124 RPL12B RPL25 RPL30 RPL3 RPL6A RPL6B RPP1 RPS0B RPS11B RPS144 RPS15 RRB1 RRP1 RRP12 RRP3 RRP8 RRP9 RRS1 RS44 SAS10 SIK1 SK16 SNU13 SOF1 SPB1 SQT1 SSF1 TIF5 URB1 UTP13 UTP15 UTP4 UTP5 UTP6 UTP8 YDR412W YTM1 ASCI1 BRX1 RPL3 RPL40B RPS04 RRP5			RPL13B (1.84) RPS9B (1.95) RPL27B (1.36) RPL21A (1.69) RPL20B (2.00)
RNA metabolism				
RNA processing				
RNA methylation/modification				
tRNA metabolism				
	CBF5 CDC60 DBP10 DBP3 DBP6 DBP7 DBP9 DED81 DIM1 DIP2 DRS1 DUS1 DUS3 EBP2 EMG1 ENP1 ENP2 ERB1 FALI FR51 FR52 GARI GCD10 GRS1 GSP1 HAS1 IMP3 IMP4 IPI3 KRRI LHP1 MES1 MIS1 MRS1 MRT4 MSS116 MTO1 MTR3 NANI NHP2 NIP7 NOC4 NOP1 NOP12 NOP14 NOP2 NOP58 NOP6 NOP7 NOP9 NSRI NUC1 NUG1 PRP43 PRP6 PUS4 PUS6 PWP1 PWP2 RCL1 RIO2 RIX1 RLP7 ROKI RPF2 RPL30 RPP1 RPS144 RRP1 RRP12 RRP3 RRP5 RRP8 RRP9 RRS1 SAS10 SES1 SIK1 SK16 SNR63 SNR72 SNR77 SNU13 SOF1 SPB1 TRM10 TRM11 TRM3 TRM5 TRM7 TRM8 TRM82 URB1 UTP13 UTP15 UTP4 UTP5 UTP6 UTP8 V4S1 WRS1 YDR412W YHR020W YNL247W TRM1 SNR75 PUS7 NCL1 DBP2			
Transcription				
	RP412 RPA135 RPA190 RPA34 RP443 RP449 RPB5 RPB8 RPC19 RPC40			
Nucleotide/nucleobase metabolism				
	AAH1 ADE13 ADE57 ADE6 APT1 CBF5 CDC60 DBP10 DBP2 DBP3 DBP6 DBP7 DBP9 DCD1 DED81 DIM1 DIP2 DRS1 DUS1 DUS3 EBP2 ELP2 EMG1 ENP1		RNR2 (0.70) ATP1 (0.74) ATP2 (0.58)	

nucleobase, nucleoside, nucleotide and nucleic acid metabolism/transport	ENP2 ERB1 FAL1 FRS1 FRS2 FURI GARI GCD10 GRS1 GSP1 GUA1 HAMI HAS1 HXK2 IMD2 IMD3 IMP3 IMP4 IPB3 KRR1 LHP1 MES1 MIS1 MRS1 MRT4 MSS116 MTO1 MTR3 NAN1 NCL1 NHP2 NIP7 NOC4 NOP1 NOP12 NOP14 NOP2 NOP58 NOP6 NOP7 NOP9 NPT1 NSR1 NUC1 NUG1 OGG1 POL5 PRP43 PRP6 PRS1 PRS3 PRS4 PRS5 PUF6 PUS4 PUS6 PUS7 PWP1 PWP2 RCL1 RIO2 RIX1 RKT1 RLP7 ROK1 RPA12 RPA135 RPA190 RPA34 RPA43 RPA49 RPB5 RPB8 RPC19 RPC25 RPC40 RPC53 RPF2 RPL30 RPP1 RPS144 RRP1 RRP12 RRP3 RRP5 RRP8 RRP9 RRS1 SAS10 SES1 SIK1 SK16 SNR63 SNR72 SNR75 SNR77 SNU13 SOF1 SPB1 TRM1 TRM10 TRM11 TRM3 TRM5 TRM7 TRM8 TRM82 URA7 URB1 UTP13 UTP15 UTP4 UTP5 UTP6 UTP8 VAS1 WRS1 YDR412W YER064C YHR020W YNL247W	CDC33 (0.66)	TEF1 (1.20)
Protein biosynthesis Amino acid activation Regulation of translation Translational elongation	CAF20 CDC60 DED81 DPM1 EFBI FRS1 FRS2 GCD10 GCD7 GCN1 GCN3 GRS1 ILS1 MES1 MNP1 MRP13 MRPL11 MRPL15 MRPL20 MRPL49 MTO1 NIP1 NIP1YHR020W PMT4 PRT1 RLJ1 RPK1 RPL11A RPL12A RPL12B RPL13A RPL13B RPL14B RPL16B RPL17B RPL18B RPL21A RPL21B RPL23A RPL24B RPL25 RPL27A RPL27B RPL28 RPL29 RPL2A RPL30 RPL32 RPL33A RPL33B RPL34B RPL35A RPL36B RPL38 RPL41A RPL42A RPL43A RPL43B RPL4A RPL4B RPL5 RPL6A RPL6B RPL8A RPP1A RPP1B RPP2A RPS0B RPS10A RPS10B RPS11B RPS14A RPS15 RPS16A RPS16B RPS18B RPS19B RPS1A RPS1B RPS2 RPS20 RPS21A RPS22A RPS24A RPS25A RPS25B RPS26A RPS26B RPS28A RPS29A RPS6A RPS7A RPS7B RPS8A RSM22 SES1 SRO9 SSB2 SSZ1 SUI3 THS1 TIF11 TIF3 TIF35 TIF5 TRM7 VAS1 WRS1 YDR341C YEF3 YHR020W YNL247W MIS1 MRPL3 RPL15A RPL22A RPL31B RPL34A RPL36A RPL40B RPL7A RPL9A RPL9B RPS0A RPS13 RPS22B RPS23A RPS23B RPS28B RPS9B RSM26 SUP45 TEF4	TPH1 (0.77)	AMS1 ATH1 CAT8 FBP26 GDB1 GID7 GLC8 GND2 IDP2 INO1 MLS1 PFK26 PIG2 SHC1 UBC8 YJR096W TDH3 (1.44) TDH1 (2.62) GPM1 (1.45) PGK1 (2.03)
Carbon source utilization Transport/Synthesis/Metabolism Nitrogen source utilization	ARO2 ARO4 ASN2 ASP1 CDC60 DED81	HOM6 (0.57) MET6 (0.30)	AGP3 ALD2 ARG4 AVT1 AVT4 AVT6 FPR1 (1.16)

Transport	<i>DYS1 FRS1 FRS2 GRS1 LEU9 LLA1</i>	<i>URA2 (0.75)</i>	<i>DAL2 DAL7 DUR1.2 GAP1 GLT1 IDP2</i>
Synthesis	<i>MAE1 MES1 PRO1 PRS1 PRS3 PRS4</i>		<i>NPRI PUT1 VBA1 CAT2 CPA1 DAL3</i>
Metabolism	<i>PRS5 SAM4 SES1 THR1 THR4 VAS1</i>		<i>DAL80 ECM40 LEU1 LYS5 MET13</i>
	<i>WRS1 YHR020W YNL247W</i>		<i>MET6 SHC1 UGA3</i>
Signal Transduction		<i>YNK1 (0.63)</i>	
calcium-mediated signaling			
Organelle structure/function			
Other metabolic functions		<i>PRX1 (0.77) TSA1 (0.47)</i>	<i>ALD2 ATG7 ATG8 ECI1 ETR1 FOX2</i>
Homeostasis/transport		<i>PET9 (0.72) ACO1 (0.32)</i>	<i>GLO1 MLS1 POT1 POX1 PXA1 PXA2</i>
			<i>TES1 YPL088W</i>
			<i>HSP104 (1.44) TRX2 (2.26)</i>
			<i>UBI4 (1.47) RIB3 (1.29) IDH1 (2.13)</i>