

Table S1. MACH-negative, MACH-reduced and MACH-slow mutant genes, grouped by biological process.

	<b>MACH negative</b>	<b>Reduced</b>	<b>Slow growers</b>
Alcohol metabolism	<i>ALD4, ACS1</i>	<i>ADH1, ADH2, ALD6</i>	
Lipid metabolism	<i>CHO2, HFA1, ISC1, MCT1, UPC2</i>	<i>AGP2, DEPI, ERG6, ERG28, GPT2, OAR1, PSD1, SAC1, SUR4</i>	<i>CEM1, HTD2, LCB5, PDX3</i>
Carbohydrate metabolism	<i>FUM1, MLS1</i>		<i>SNF1, ACO1, KGD2</i>
Amino acid metabolism	<i>ARG82</i>	<i>HIS7, ILV1, AAT1, AAT2</i>	<i>CAR2, CYS3, CYS4, PUT2</i>
Ubiquinone biosynthesis and metabolism			<i>CAT5, COQ2, COQ3, COQ4, COQ5</i>
Respiratory chain complexes	<i>NDI1</i> (complex I), <i>QCR6</i> (complex III), <i>QCR9</i> (complex III), <i>QCR10</i> (complex III), <i>COX5A</i> (complex IV)	<i>QCR7</i> (complex III), <i>COX6</i> (complex IV)	<i>SDH1</i> (complex II), <i>SDH2</i> (complex II), <i>SDH4</i> (complex II), <i>COR1</i> (complex III), <i>CYT1</i> (complex III), <i>QCR2</i> (complex III), <i>QCR8</i> (complex III), <i>RIP1</i> (complex III), <i>COX9</i> (complex IV)
Respiratory chain related	<i>CBT1, COX11, COX23, CBP4, CYC1, CYC2, PET54, MSS18</i>	<i>PET100</i>	<i>CBP2, CBP3, CBP6, CBS1, CBS2, CYC3, CYT2, COX10, COX14, COX15, COX20, MSS2, MSS51, PET117, PET122, PET309</i>
ATP synthase related	<i>ATP2, ATP18, FMC1</i>		<i>AEP1, AEP2, AEP3, ATP5, ATP10, ATP14, ATP15, ATP17</i>
Mitochondrial transcription	<i>HAP2, HAP3, HAP4, HAP5</i>		<i>MSS116, MTF2, RPO41</i>
Mitochondrial protein biosynthesis	<i>MRP49, MRPL17, MRPL51, MRPS35, MST1, PET112</i>	<i>IFM1, MRPL10, MRPL38, MSK1</i>	<i>ISM1, MEF1, MEF2, MRM1, MRP2, MRP7, MRP10, MRP20, MRP21, MRP51, MRPL6, MRPL7, MRPL8, MRPL9, MRPL11, MRPL13, MRPL15, MRPL16, MRPL20, MRPL22, MRPL23, MRPL24, MRPL25, MRPL27, MRPL31, MRPL32, MRPL33, MRPL35, MRPL37, MRPL49, MRPS5, MRPS8, MRPS28, MSD1, MSF1, MSM1, MSR1, MSW1, MSY1, MTG1, MTG2, NAM2, PET123, RML2, RSM7, RSM18, RSM19, RSM23, RSM24, RSM27, SLM5, SWS2, TUF1</i>
Mitochondrial genome maintenance			<i>ABF2, HMI1, IMG1, MGM101, MHR1, PIF1</i>
Mitochondrial transport	<i>ODC1, OXA1, TIM18, YIA6, YMR166C</i>	<i>ISA1, YEA6, YDL119C</i>	<i>AFG3, COX17, COX19, GEM1, ISA2, LPE10, MRS2, MTM1, OCT1, PET8, UGO1</i>
Mitochondrial	<i>COQ10, FZOL, GCV3,</i>	<i>FMP36, FMP51,</i>	<i>FMP38, IMP1, MDJ1, MET7,</i>

- other	<i>LAT1, MAM33, MDM10, MDM30, MDM34, PDB1, PIM1, YIL077C</i>	<i>MDM35, MNE1, MRM2, SHE9, YER077C, YER078C</i>	<i>MGM1, MIP1, MSH1, MSU1, PDA1, PPA2, QRI5, QRI7, SLM3, SLS1, SOV1, YGR102C, YGR150C, YJR120W, YLR091W, YMR098C, YMR293C, YNL213C, YNR036C</i>
Vacuolar		<i>PEP7, PER1, VPH1</i>	<i>CUP5, DID4, PEP3, PEP8, PPA1, TFP1, TFP3, VBA3, VMA5, VMA8, VMA10, VMA13, VMA21, VMA22, VPS16, VPS33, VPS34</i>
Transcription	<i>CDC73, ELP6, PHO2, ROX3, SPT4</i>	<i>EAF7, ELP2, MAF1, REF2, RLR1, RPB4</i>	<i>CST6, GLN3, HDA2, RPB9, SNF6, SWI3</i>
Translation and protein metabolism	<i>BUL1, DEG1, EFT1, FES1, KEX2, RAD6, RPL7A, RPL13B, RPL21A, TEF4, TIF3, UMP1, URM1</i>	<i>MNN1, RPS17A</i>	<i>ANP1, DOC1, EUG1, FUN12, MAP1, PPT2, RPL1B, RPL27A, RPL35B, UFO1, YOR302W</i>
Phosphate metabolism			<i>PHO4, PHO81, PHO85</i>
Stress response	<i>GSH1, MSN1</i>	<i>RVS167, SOH1</i>	<i>EXO1, GON7, GRX5, SAG1, SKT5, SSA4, SSQ1, YGP1</i>
Cell wall organization and biogenesis	<i>CDC10, GAS1, HOC1, SIT4, VRP1</i>	<i>CHS6, GET2</i>	<i>KNH1, PKH2</i>
Cytoskeleton organization and biogenesis	<i>BEM1, BUD23, VIP1</i>		
Transport	<i>ATG11, BRO1, CAN1, CCC2, GEF1, NPR2, PHO86, SSO1, SRO77, SYN8</i>	<i>NPL6, ZRG17</i>	<i>ATG20, CTR1, FET3, FTR1, MOG1, OPT2, PMR1, VBA1</i>
Nucleobase, nucleoside, nucleotide and nucleic acid metabolism	<i>HPA3, HTA1, NGG1, NGL1, NGL2, SNT309</i>	<i>ADO1, PAN2, RAI1, RNH202</i>	<i>NSR1, RNR1, RNR4, SNF2, SUV3</i>
Cell cycle	<i>BUB3, HOP1, IWR1, ZIP1</i>	<i>DOM34, SRC1, VHS1</i>	<i>GIN4, HTL1</i>
Vitamin biosynthesis	<i>THI6</i>		<i>RIB4</i>
Other	<i>AKR1, EST2, URA8</i>	<i>PEX15, PEX30, RIM8, RIM9, SHM1, SSK2, YPT10</i>	<i>ATS1, BUD16, CNM67, INH1, PTC1, RHO4, TPD3, YKL118W</i>
Unknown function	<i>APQ13, FYV12, HVG1, OPI10, PHM6, PRY1, RBD2, SPO7, TVP18, VPS65, YEN1, YAL042C-A, YAR029W, YBL012C, YBL062W, YBR147W, YDL057W, YDL176W, YDL177C, YDR008C, YDR095C, YDR269C, YDR271C, YGR250C, YJL206C, YJR129C, YKL137W, YML009W-B, YNR047W, YPL229W, YPL247C, YPR099C</i>	<i>HIT1, IES5, KKQ8, PBP2, SLM6, YCR001W, YCR061W, YDR203W, YGR064W, YHR113W, YHR130C, YIL089W, YIL092W, YJL213W, YLL029W, YLR252W, YLR404W, YOR333C, YPL098C, YPL208W, YPR123C, YDL118W</i>	<i>CWH36, LDB17, NRP1, PMD1, RMD9, YCP4, YIM2, YDL032W, YDR230W, YGL220W, YGR026W, YJL027C, YJL046W, YKL169C, YLR202C, YMR184W, YNL170W, YNL184C, YNR020C, YOR199W, YOR200W, YOR304C-A</i>