

Table S1. The genotypes of yeast strains frequently used in the present study.

| Strain | Genotype | Abbreviated form |
|----------------------|--|--|
| BY4742 | <i>MATα his3 leu2 met15 ura3</i> | |
| <i>gat1</i> Δ | <i>MATα his3 leu2 met15 ura3 YKR067w::kanMX4</i> | |
| <i>gat2</i> Δ | <i>MATα his3 leu2 met15 ura3 YBL011w::kanMX4</i> | |
| NIU8 | <i>MATα his3 leu2 met15 ura3 YKR067w::kanMX4 YBL011w::HIS3 [pGAL1::GAT1 URA3]</i> | <i>gat1</i> Δ <i>gat2</i> Δ + <i>[pGAL1::GAT1 URA3]</i> |
| ZAFU1 | <i>MATα his3 leu2 met15 ura3 YKR067w::kanMX4 YBL011w::HIS3 [pGAL1::AtGPAT1 LEU2]</i> | <i>gat1</i> Δ <i>gat2</i> Δ + <i>[pGAL1::AtGPAT1 LEU2]</i> |

Table S2. A list of primers used for cloning of individual genes into YEplac181 vector.

| Gene | ORF length (bp) | Primer with restriction site | Nucleotide sequence (5'-3') |
|--------------------------|-----------------|------------------------------|--|
| <i>At1g06520/AtGPAT1</i> | 1758 | AtGPAT1-FP BamHI | AGCTCGGATCCACTATGGTTTTACCAGAGCTTC |
| | | AtGPAT1-RP Sall | GACTGGTCGACAGTTTATCTGACAATGCCTTC |
| <i>At1g02390/AtGPAT2</i> | 1593 | AtGPAT2-FP BamHI | ATCAGGATCCACCATGTCCGGTAATAAGATCTCG |
| | | AtGPAT2-RP Sall | TGCAGTCGACAATTATTTTTCTTGACAACCTCCG |
| <i>At4g01950/AtGPAT3</i> | 1563 | AtGPAT3-FP BclI | TGAATGATCAAACATGTCCGCCAAGATTTTC |
| | | AtGPAT3-RP Sall | ACAAGTCGACCGAACTCATCACTCACTCATCA |
| <i>At1g01610/AtGPAT4</i> | 1512 | AtGPAT4-FP BglII | AGAAAAGATCTAAGATGTCTCCGGCGAAGAA |
| | | AtGPAT4-RP Sall | AAAGGTCGACTGGATTATTACTCCATGGACTTGGT |
| <i>At3g11430/AtGPAT5</i> | 1509 | AtGPAT5-FP HindIII | TCTCAAGCTTCAAAAATGGTTATGGAGCAAGCTGG |
| | | AtGPAT5-RP Sall | AACTGTCGACTTCAATGGAGACAAGGCTCGAAAGT |
| <i>At2g38110/AtGPAT6</i> | 1506 | AtGPAT6-FP BamHI | AAGAGGATCCAACATGGGAGCTCAGGAGAAACGG |
| | | AtGPAT6-RP Sall | TGCAGTCGACATCACGTCTTCTCCTTCTTCACC |
| <i>At5g06090/AtGPAT7</i> | 1503 | AtGPAT7-FP BglII | AACAAGATCTAACATGGAGTCATCAACTACAACATCGT |
| | | AtGPAT7-RP Sall | GTGTGTCGACTTAATGCAAAAAAGGTTTGAAAGTGGTG |
| <i>At4g00400/AtGPAT8</i> | 1503 | AtGPAT8-FP HindIII | AAGAAAAGCTTCAAAAATGTCTCCGGAGAAGAAGAGTC |
| | | AtGPAT8-RP Sall | TACTAGTCGACTCACTTCTTGGTGTGTTGATAGAC |
| <i>GAT1</i> | 2232 | ZZF1 FP BamHI | GGATCCAACATGTCTGCTCCCGCTGCCGATCAT |
| | | ZZF2 RP XhoI | CTCGAGTCATTCTTTCTTTTCGTGTTCTCT |
| <i>GAT2</i> | 2280 | ZZF3 FP BamHI | GGATCCAACATGCCTGCACCAAAAACCTCACGGAG |
| | | ZZF4 RP XhoI | CTCGAGCTACGCATCTCCTTCTTTCCCTTC |

Table S3. A list of primers used for cloning of individual genes into pYES2-Kan-ADH1 vector.

| Gene | ORF length (bp) | Primer with restriction site | Nucleotide sequence (5'-3') |
|---------------------------|-----------------|------------------------------|--|
| <i>At1g06520/AtGPAT1</i> | 1758 | AtGPAT1-1 FP BamHI | AGCTCGGATCCACTATGGTTTTACCAGAGCTTC |
| | | AtGPAT1-1 RP Sall | GACTGGTTCGACAGTTTATCTGACAATGCCTTC |
| <i>At1g02390/AtGPAT2</i> | 1593 | AtGPAT2-2-FP KpnI | ATCAGGTACCATGTCCGGTAATAAGATCTCG |
| | | AtGPAT2-2-RP KpnI | TGCAGGTACCAATTATTTTTTCTTGACAACCTCCG |
| <i>At4g01950/AtGPAT3</i> | 1563 | AtGPAT3-3-FP KpnI | TGAAAGGTACCAAACATGTCCGCCAAGATTTTC |
| | | AtGPAT3-3-RPKpnI | ACAAGGTACCGAACTCATCACTCACTCATCA |
| <i>At1g01610/AtGPAT4</i> | 1512 | AtGPAT4-4-FP KpnI | AGAAGGTACCAAGAAAGATGTCTCCGGCGAAGA |
| | | AtGPAT4-4-RP KpnI | AAAGGGTACCTGGATTACTTCCATGGACTTGGT |
| <i>At3g11430/AtGPAT5</i> | 1509 | AtGPAT5-5-FP KpnI | TCTAGGTACCGAAATGGTTATGGAGCAAGCTGG |
| | | AtGPAT5-5-RP KpnI | AACTGGTACCTTCAATGGAGACAAGGCTCGAAAGT |
| <i>At2g38110/AtGPAT6</i> | 1506 | AtGPAT6-6-FP BamHI | AAGAGGATCCAACATGGGAGCTCAGGAGAAACGG |
| | | AtGPAT6-6-RPSalI | TGCAGTCGACATCACGCTTCTCCTTCTTACC |
| <i>At5g06090/AtGPAT7</i> | 1503 | AtGPAT7-7-FP KpnI | AACAGGTACCATGGAGTCATCAACTACAACATCGT |
| | | AtGPAT7-7-RP KpnI | GTGTGGTACCTTAATGCAAAAAAGGTTTGAAAAGTGGTG |
| <i>At4g00400/AtGPAT8</i> | 1503 | AtGPAT8-8-FP KpnI | AAGAGGTACCAAAATGTCTCCGGAGAAAGAGTCT |
| | | AtGPAT8-8-RP KpnI | TACTAGGTACCTCACTTCTTGGTGTGTGATAGAC |
| <i>GAT1</i> | 2232 | ZZF1 FP BamHI | GGATCCAACATGTCTGCTCCCGCTGCCGATCAT |
| | | ZZF2 RP XhoI | CTCGAGTCATTCTTTCTTTTCGTGTTCTCT |
| <i>GAT2</i> | 2280 | ZZF3 FP BamHI | GGATCCAACATGCCTGCACCAAAACTCACGGAG |
| | | ZZF4 RP XhoI | CTCGAGCTACGCATCTCCTTCTTTCCCTTC |
| <i>At1g32200/ATS1</i> | 1380 | ZZF144 FP KpnI | CATAGGTACCATGACTCTCACGTTTTCTCCTCT |
| | | ZZF145 RP XhoI | GACACTCGAGCTAATTCCAAGTTGTGACAAAG |
| <i>SLC1/YDL052c</i> | 912 | SLC1 FP BamHI | AGTTGGATCCATAATGAGTGTGATAGGTAGTTCTT |
| | | SLC1 RP BamHI | AACTGGATCCATGTGGTGGTGGCTTAATGCAT |
| <i>PST1/CST26/YBR042c</i> | 1194 | lei5-5 FP BamHI | AGCTCGGATCCAACATGCTGCATCAAAAAATAGCTC |
| | | lei5-5 RP XhoI | GACTGCTCGAGTCAAAAAATAAAACAATAAAGTTATAAAC |
| <i>At1g75020/LPAT4</i> | 1137 | LPAT4 FP BglII | GGAAGATCTAACATGGAAGTTTGCGGGGATCT |
| | | LPAT4 RP XhoI | CCGCTCGAGGCATCCCAGAGATATTTTCTGC |
| <i>At5g13760</i> | 1710 | myc1-1-FP BamHI | AGGTCCGATCCAACATGGGTGCAACAGAGCCC |
| | | myc 1-1-RP XhoI | GCTTCTCGAGCTAAGCTAGAGCACGGCGAA |
| <i>At1g25500</i> | 1467 | myc 2-2-FP BamHI | AGTCCGGATCCAACATGAGTGACTCCACTAACAGCG |
| | | myc 2-2-RP XhoI | GTACGCTCGAGTCAAGCGGTCGTCAAAACTT |
| <i>YOR161c</i> | 1620 | lei10-10 FP BamHI | AGCTCGGATCCAACATGCCATTGAATGAAAAATACGA |
| | | lei10-10 RP XhoI | GACTGCTCGAGTCACACATTCTGGTACTCAATTT |