

Supplementary information for
“Producing human ceramide-NS by metabolic engineering using yeast *Saccharomyces cerevisiae*”

Table S1. Plasmids used in this study.

| Name | Relevant information | Source |
|--------------------------------|---|---|
| pRS426 | 2 μ , GPD promoter, <i>URA3</i> | Mumberg et al., Gene (1995) 156, 119-22 |
| pRS426- <i>hDES1</i> | 2 μ , GPD promoter, <i>URA3</i> | This study |
| pRS426-2HA- <i>hDES1</i> | 2 μ , GPD promoter, <i>URA3</i> | This study |
| pRS426-GFP- <i>hDES1</i> | 2 μ , GPD promoter, <i>URA3</i> | This study |
| pRS426- <i>hDES1</i> -KKEK | 2 μ , GPD promoter, <i>URA3</i> | This study |
| pRS426-GFP- <i>hDES1</i> -KKEK | 2 μ , GPD promoter, <i>URA3</i> | This study |
| pRS426- <i>SpDSD1</i> | 2 μ , GPD promoter, <i>URA3</i> | This study |
| pRS426- <i>mDES1</i> | 2 μ , GPD promoter, <i>URA3</i> | This study |
| pRS426- <i>mDES2</i> | 2 μ , GPD promoter, <i>URA3</i> | This study |
| pRS426- <i>ScSUR2</i> | 2 μ , GPD promoter, <i>URA3</i> | This study |
| pRS424 | 2 μ , GPD promoter, <i>TRP1</i> | Mumberg et al., Gene (1995) 156, 119-22 |
| pRS424- <i>ScLAC1</i> | 2 μ , GPD promoter, <i>TRP1</i> | This study |
| pRS423 | 2 μ , GPD promoter, <i>HIS3</i> | Mumberg et al., Gene (1995) 156, 119-22 |
| pRS423- <i>ScLAG1</i> | 2 μ , GPD promoter, <i>HIS3</i> | This study |
| pYE22m | 2 μ , <i>TDH3</i> promoter, <i>TRP1</i> | Sawai-Hatanaka et al., Biosci. Biotechnol. Biochem. (1995) 59, 1221-8 |
| pYE22m- <i>ScISC1</i> | 2 μ , <i>TDH3</i> promoter, <i>TRP1</i> | This study |

Table S2. Strains used in this study.

| Name | Genotype | Source or Reference | Figure |
|-----------------|--|---|----------------------------|
| RH6082 (FKY113) | <i>MATa ura3, his3, leu2, lys2, trp1, bar1-1</i> | Kajiwara et al., Mol Biol Cell (2008) 19, 2069-82 | 1B-C, 2A-B, 4A-B, 5A-C |
| FKY268 | <i>MATa sur2Δ::LEU2, ura3, his3, leu2, lys2, trp1, bar1-1</i> | Ikeda et al., J. Cell Sci. (2015) 1282, 2454-67 | 1B-C, 2A-C, 3A, 4A-B, 5A-C |
| FKY277 | <i>MATa scs7Δ::ura3 sur2Δ::LEU2 ura3 his3 leu2 lys2 trp1 bar1-1</i> | This study | 1B-C, 2C-E, 3A-B |
| FKY300 | <i>MATa scs7Δ::KanMX sur2Δ::LEU2 ura3 his3 leu2 lys2 trp1 bar1-1</i> | This study | 3C, 4A-B, 5B-E |
| FKY301 | <i>MATa scs7Δ::KanMX sur2Δ::LEU2 ydc1Δ::HIS3 ura3 his3 leu2 lys2 trp1 bar1-1</i> | This study | 3C |