**Supplementary Table S1 - Plasmids used in this study.**

|  |  |  |
| --- | --- | --- |
| Name | Relevant information | Source |
| pJU675 | pRS416-*SCH9* | [1] |
| pJU849 | pRS416-*SCH9 (K441A; kd)* | [1] |
| pJU822 | pRS416-*SCH9 (T723A, S726A, T737A, S758A, S765A; 5A)* | [1] |
| pJU841 | pRS416-*SCH9 (T723D, S726D, T737E, S758E, S765E; 2D3E)* | [1] |
| pJU676 | pRS416-*SCH9-5HA* | [1] |

1. Urban J, Soulard A, Huber A, Lippman S, Mukhopadhyay D, Deloche O, Wanke V, Anrather D, Ammerer G, Riezman H*, et al.* (2007) Sch9 is a major target of TORC1 in *Saccharomyces cerevisiae*. *Mol Cell* **26**: 663-74

**Supplementary Table S2 -** **Yeast strains used in this study.**

|  |  |  |
| --- | --- | --- |
| Name | Genotype | Source |
| FKY1131 | *MAT***a** *ura3 his3 leu2 lys2* | [1] |
| FKY2736 | *MAT***** *ura3 his3 leu2 met15* | This study |
| FKY2739 | *MAT***a** *ura3 his3 leu2 met15 LCB1::lcb1-100::HIS3* | [2]~~This study~~ |
| SEY6210 | *MAT******ura3-52 his3200 lys2-801 leu203,112 trp1901 suc29* | [3] |
| MTY29 | *MAT******ura3-52 his3200 lys2-801 leu203,112 trp1901 suc29**pkh1::HIS3MX6 pkh2::HIS3MX6 pRS415-pkh1ts* | [4] |
| RH5411 | *MAT***a** *ura3 leu2 trp1 his2 ade1 bar1::URA3*  | [5] |
| RH5413 | *MAT***a** *ura3 leu2 trp1 his3 ade2 bar1 lys2 pkh1::TRP1*  | [5] |
| RH5388 | *MAT***a** *ura3 leu2 trp1 ade2 bar1::URA3 pkh2::LEU2*  | [5] |
| AAY603 | *MAT******ura3-52 his3200 lys2-801 leu203,112 trp1901 suc29**pkc1::LEU2 YCplac50-pkc1-2* | [6] |
| MTY77 | *MAT******ura3-52 his3200 lys2-801 leu203,112 trp1901 suc29**ypk1ts::HIS3 ypk2::HIS3MX6* | [4] |
| W303-1A | *MAT***a** *his3-11, 15 ade2-1 ura3-1 leu2-3, 112 trp1-1 can1-100* | [7] |
| FKY3873 | *MAT***a** *his3-11, 15 ade2-1 ura3-1 leu2-3, 112 trp1-1 can1-100**sch9::HIS3* | This study |
| JK9-3da | *MAT***a** *leu2-3, 112 trp1 ura3 rme1 his4 HMLa* | [8] |
| SH229 | *MAT***a** *leu2-3, 112 trp1 ura3 rme1 his4 HMLa ade2 tor2::ADE2**tor1::HIS3* Ycplac111-*tor2-29* | [8] |
| PLY718 | *MAT***a** *leu2-3,-112; his3-11,-15; trp1-1; ura3-1; ade2-1; can1-100**AVO3-MYC:TRP1* | [9] |
| PLY1134 | *MAT***a** *leu2-3,-112; his3-11,-15; trp1-1; ura3-1; ade2-1; can1-100**avo3-30-MYC:TRP1* | [9] |
| FKY511 | *MAT***** *leu2 ura3 trp1 bar1* | This study |
| RH6013 | *MAT***** *leu2 ura3 trp1 bar1 lip1::HIS3* | [10] |
| BY4742 | *MAT***** *his31 leu20 lys20 ura30* | [1] |
| FKY1705 | *MAT***** *his31 leu20 lys20 ura30 csg1::kanMX4* | Open biosystems, Inc |
| FKY1707 | *MAT***** *his31 leu20 lys20 ura30 csg2::kanMX4*  | Open biosystems, Inc |
| FKY1709 | *MAT***** *his31 leu20 lys20 ura30 csh1::kanMX4* | Open biosystems, Inc |
| FKY1713 | *MAT***** *his31 leu20 lys20 ura30 ipt1::kanMX4* | Open biosystems, Inc |
| SEY6210.1 | *MAT***a** *leu2-3,112 ura3-52 his3200 trp1-901 lys2-802 suc29* | [11] |
| ANDY198 | *MAT***a** *leu2-3,112 ura3-52 his3200 trp1-901 lys2-802 suc29**ist2::HISMX6 scs2::trp1 scs22::HISMX6* | [11] |
| RH6082 | *MAT***a** *ura3, his3, leu2, lys2, trp1, bar1-1* | [12] |
| FKY3498 | *MAT***a** *ura3, his3, leu2, lys2, trp1, bar1-1 ist2::HIS3* | This study |
| FKY1453 | *MAT***a** *ura3, his3, leu2, lys2, trp1, bar1-1 scs2::URA3 scs22::HIS3* | This study |
| RH5578 | *MAT***a** *ura3, his3, leu2, lys2, trp1, bar1-1**tcb1::TRP1 tcb2::HIS3 tcb3::LEU2* | This study |
| FKY3914 | *MAT***** *his31 leu20 lys20 ura30 epo1::kanMX4* | Open biosystems, Inc |
| FKY3915 | *MAT***** *his31 leu20 lys20 ura30 ltc1::kanMX4* | Open biosystems, Inc |
| FKY3916 | *MAT***** *his31 leu20 lys20 ura30 nvj1::kanMX4* | Open biosystems, Inc |
| PLY1083 | *MAT***** *his3-11, 15 ade2-1 ura3-1 leu2-3, 112 trp1-1 can1-100**ypk1::TRP1 ypk2::HIS3*+[pPL216] | [13] |
| PLY1098 | *MAT***** *his3-11, 15 ade2-1 ura3-1 leu2-3, 112 trp1-1 can1-100**ypk1::TRP1 ypk2::HIS3*+[pPL220] | [13] |

1. Kajiwara K, Muneoka T, Watanabe Y, Karashima T, Kitagaki H, Funato K. (2012) Perturbation of sphingolipid metabolism induces endoplasmic reticulum stress-mediated mitochondrial apoptosis in budding yeast. *Mol Microbiol* **86**:1246-61

2. Yamaguchi Y, Katsuki Y, Tanaka S, Kawaguchi R, Denda H, Ikeda T, Funato K, Tani M. (2018) Protective role of the HOG pathway against the growth defect caused by impaired biosynthesis of complex sphingolipids in yeast Saccharomyces cerevisiae. *Mol Microbiol* **107**:363-386

3. Robinson JS, Klionsky DJ, Banta LM, Emr SD (1988) Protein sorting in *Saccharomyces cerevisiae*: isolation of mutants defective in the delivery and processing of multiple vacuolar hydrolases. *Mol Cell Biol* **8**: 4936-48

4. Omnus DJ, Manford AG, Bader JM, Emr SD, Stefan CJ (2016) Phosphoinositide kinase signaling controls ER-PM cross-talk. *Mol Biol Cell* **27**: 1170-80

5. Friant S, Lombardi R, Schmelzle T, Hall MN, Riezman H (2001) Sphingoid base signaling via Pkh kinases is required for endocytosis in yeast. *EMBO J* **20**: 6783-92

6. Audhya A, Emr SD (2002) Stt4 PI 4-kinase localizes to the plasma membrane and functions in the Pkc1-mediated MAP kinase cascade. *Dev Cell* **2:** 593-605

7. Yabuki Y, Katayama M, Kodama Y, Sakamoto A, Yatsuhashi A, Funato K, Mizuta K. (2017) Arp2/3 complex and Mps3 are required for regulation of ribosome biosynthesis in the secretory stress response. *Yeast* **34**:155-163.

8. Helliwell SB, Schmidt A, Ohya Y, Hall MN (1998) The Rho1 effector Pkc1, but not Bni1, mediates signalling from Tor2 to the actin cytoskeleton. *Curr Biol* **8**: 1211-14

9. Niles BJ, Mogri H, Hill A, Vlahakis A, Powers T (2012) Plasma membrane recruitment and activation of the AGC kinase Ypk1 is mediated by target of rapamycin complex 2 (TORC2) and its effector proteins Slm1 and Slm2. *Proc Natl Acad Sci U S A* **109**: 1536-41

10. Vallée B, Riezman H (2005) Lip1p: a novel subunit of acyl-CoA ceramide synthase. *EMBO J* **24**: 730-41

11. Manford AG, Stefan CJ, Yuan HL, Macgurn JA, Emr SD (2012) ER-to-plasma membrane tethering proteins regulate cell signaling and ER morphology. *Dev Cell* **23**: 1129-40

12. Kajiwara K, Watanabe R, Pichler H, Ihara K, Murakami S, Riezman H, Funato K (2008) Yeast *ARV1* is required for efficient delivery of an early GPI intermediate to the first mannosyltransferase during GPI assembly and controls lipid flow from the endoplasmic reticulum. *Mol Biol Cell* **19**: 2069-82

13. Niles BJ, Joslin AC, Fresques T, Powers T. (2014) TOR complex 2-Ypk1 signaling maintains sphingolipid homeostasis by sensing and regulating ROS accumulation. *Cell Rep* **6**:541-552