

**Table S2. Plasmids used in strain construction**

Plasmid	Base vector	Relevant gene	Construction information
B48	Yeast centromeric	$P_{I_{tetO}}-CFP$	Laboratory stock
B89	pJRL2	$P_{PGK1}-vYFP$	Laboratory stock, <i>leu2</i> integrating vector [26]
B108	pBluescript	<i>KIURA3</i>	Laboratory stock, contains <i>URA3</i> gene from <i>K. lactis</i> ; PCR template for <i>pho84Δ</i> in Y320
B129	pRS303	<i>HIS3MX6</i>	<i>HIS3MX6</i> from pFA6a- <i>HIS3MX6</i> [28] (BglII/EcoRI digested) ligated into pRS303 (BamHI/EcoRI); PCR template for <i>phm4Δ</i> in Y785
B133	pRS303	$P_{GPD}-PHO84-$ <i>HIS3MX6</i>	Into pRS303, cloned $P_{GPD}-PHO84$ (SalI/PvuII into SalI/EcoRV) and <i>HIS3MX6</i> (BglII/EcoRI into BamHI/EcoRI)
B141	pJRL2	$P_{TEF1m7}-PHO4 -$ <i>cYFP</i>	PCRed <i>PHO4-Citrine</i> from EY2150 genome and clone $P_{TEF1m7}$ (SalI/EcoRI) – <i>PHO4</i> – <i>Citrine</i> (EcoRI/NotI) into SalI/NotI digested pJRL2 (B89). $P_{TEF1m7}$ from [29].
B163	pRS303	$P_{I_{tetO}}-vYFP$	Laboratory stock
B165	pRS303	$P_{7tetO}-vYFP$	Laboratory stock
B198	pRS303	$P_{7tetO}-tTA$	Laboratory stock
B228	pCM189	$P_{ADH1}-tTA$	Laboratory stock

B229	pRS303	$P_{I_{tetO}}-tdTomato$	Laboratory stock
B464	pBluescript	<i>klura3</i>	Digested B108 with EcoRV and self-ligated to remove portion of ORF and make <i>KIURA3</i> non-functional; PCR template for <i>klura3</i> Y784
B579	pRS306	$P_{I_{tetO}}-CFP$	XhoI/NotI digested $P_{I_{tetO}}-CFP$ from B48 ligated in front of $T_{ACT1}$ in pRS306 (XhoI/NotI)
B720	pRS306	$P_{7_{tetO}}-CFP$	XhoI/BamHI digested $P_{7_{tetO}}-CFP$ from B198 ligated in front of $T_{ACT1}$ in pRS306 (XhoI/NotI)
B798	pJRL2	$P_{TEF1m7}-PHO4\Delta P2-$ <i>tetR-cYFP</i>	$P_{TEF1m7}$ (SalI/EcoRI) – <i>PHO4</i> (1-600bp) (EcoRI/SpeI) – linker – <i>tetR</i> (SpeI/PacI) – linker – <i>Citrine</i> (PacI/NotI) ligated into SalI/NotI digested pJRL2 (B89)
B858	pRS316	$P_{DOA1}-DOA1$	PCRed <i>DOA1</i> locus from Y1 (BamHI/NotI) and ligated into pRS316