

Supplemental Figure 1

β -estradiol concentration on plate:

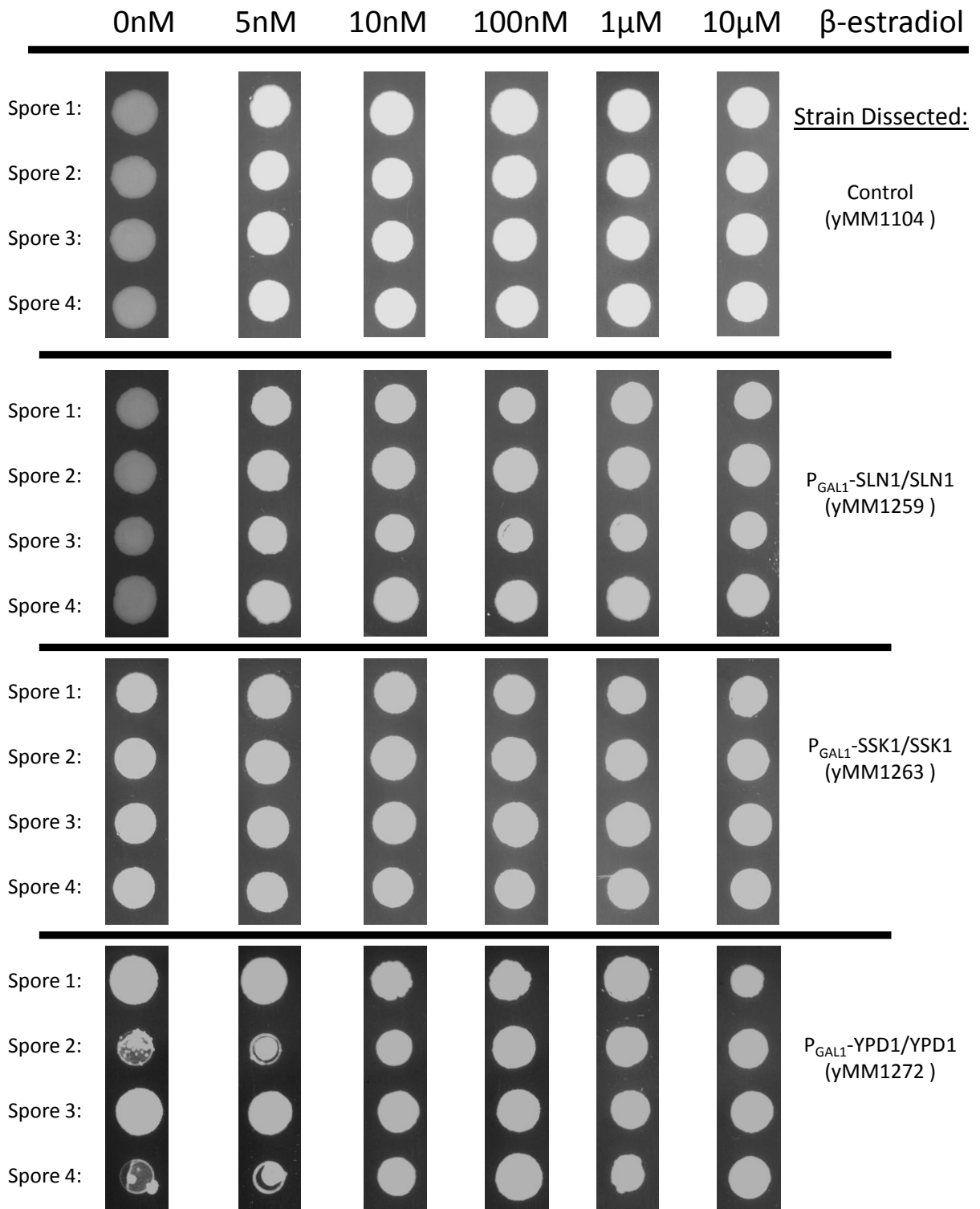


Figure S1: Underexpression of Ypd1 but not other relay components causes a growth defect. Diploid homozygous GEV strains carrying one inducible allele of a relay component (GENE/ P_{GAL1} -GENE) were sporulated onto 10nM β -estradiol and individual spores were frogged onto plates containing different β -estradiol concentrations. Only underexpression of Ypd1 causes a growth defect.

Supplemental Table 1

Strain	Relevant Genotype	Full Genotype	Reference
yMM598	Wild-type GEV Mata	Mata α (P _{GAL10} +gal1) Δ ::loxP gal4 Δ ::LEU2 HAP1 leu2 Δ 0::P _{ACT1} -GEV-NatMX	Mclsaac, et al. 2011
yMM630	Wild-type GEV ura3 Δ	Mata α (P _{GAL10} +gal1) Δ ::loxP gal4 Δ ::LEU2, HAP1 leu2 Δ 0::P _{ACT1} -GEV-NatMX ura3 Δ ::HphMX4	Mclsaac, et al. 2011
yMM1100	gal10 Δ ::KanMX	MAT a gal10 Δ ::KanMX his3 Δ 1 leu2 Δ 0 lys2 Δ 0 ura3 Δ 0	Invitrogen
yMM1101	Wild-type GEV Mata	Mat a (P _{GAL10} +gal1) Δ ::loxP gal4 Δ ::LEU2 HAP1 leu2 Δ 0::P _{ACT1} -GEV-NatMX	Mclsaac, et al. (DBY12020)
yMM1104	Wild-type GEV/GEV	MATa/ α (P _{GAL10} +gal1) Δ ::loxP/ (P _{GAL10} +gal1) Δ ::loxP leu2 Δ 0::P _{ACT1} -GEV-NatMX/ leu2 Δ 0::P _{ACT1} -GEV-NatMX gal4 Δ ::LEU2/gal4 Δ ::LEU2	This study
yMM1259	GEV/GEV P _{GAL1} -SLN1/SLN1	MATa/ α (P _{GAL10} +gal1) Δ ::loxP/ (P _{GAL10} +gal1) Δ ::loxP leu2 Δ 0::P _{ACT1} -GEV-NatMX/ leu2 Δ 0::P _{ACT1} -GEV-NatMX gal4 Δ ::LEU2/gal4 Δ ::LEU2 SLN1/KanMX-P _{GAL1} -SLN1	This study
yMM1263	GEV/GEV P _{GAL1} -SSK1/SSK1	MATa/ α (P _{GAL10} +gal1) Δ ::loxP/ (P _{GAL10} +gal1) Δ ::loxP leu2 Δ 0::P _{ACT1} -GEV-NatMX/ leu2 Δ 0::P _{ACT1} -GEV-NatMX gal4 Δ ::LEU2/gal4 Δ ::LEU2 SSK1/KanMX-P _{GAL1} -SSK1	This study
yMM1264	GEV/GEV P _{GAL1} -SSK1/SSK1	MATa/ α (P _{GAL10} +gal1) Δ ::loxP/ (P _{GAL10} +gal1) Δ ::loxP leu2 Δ 0::P _{ACT1} -GEV-NatMX/ leu2 Δ 0::P _{ACT1} -GEV-NatMX gal4 Δ ::LEU2/gal4 Δ ::LEU2 HAP1/HAP1 SSK1/KanMX-P _{GAL1} -SSK1	This study
yMM1272	GEV/GEV P _{GAL1} -YPD1/YPD1	MAT a/ α (P _{GAL10} +gal1) Δ ::loxP/ (P _{GAL10} +gal1) Δ ::loxP leu2 Δ 0::P _{ACT1} -GEV-NatMX/ leu2 Δ 0::P _{ACT1} -GEV-NatMX gal4 Δ ::LEU2/gal4 Δ ::LEU2 YPD1/KanMX-P _{GAL1} -YPD1	This study
yMM1277	GEV/GEV P _{GAL1} -PBS2/PBS2	MATa/ α (P _{GAL10} +gal1) Δ ::loxP/ (P _{GAL10} +gal1) Δ ::loxP leu2 Δ 0::P _{ACT1} -GEV-NatMX/ leu2 Δ 0::P _{ACT1} -GEV-NatMX gal4 Δ ::LEU2/gal4 Δ ::LEU2 HAP1/HAP1 PBS2/KanMX-P _{GAL1} -PBS2	This study
yMM1286	GEV/GEV P _{GAL1} -PBS2/PBS2	MAT a/ α HAP1+/HAP1+ (P _{GAL10} +gal1) Δ ::loxP/ (P _{GAL10} +gal1) Δ ::loxP leu2 Δ 0::P _{ACT1} -GEV-NatMX/ leu2 Δ 0::P _{ACT1} -GEV-NatMX gal4 Δ ::LEU2/gal4 Δ ::LEU2 PBS2/KanMX-P _{GAL1} -PBS2	This study
yMM1287	GEV/GEV P _{GAL1} -SSK22/SSK22	MAT a/ α HAP1+/HAP1+ (P _{GAL10} +gal1) Δ ::loxP/ (P _{GAL10} +gal1) Δ ::loxP leu2 Δ 0::P _{ACT1} -GEV-NatMX/ leu2 Δ 0::P _{ACT1} -GEV-NatMX gal4 Δ ::LEU2/gal4 Δ ::LEU2 SSK22/KanMX-P _{GAL1} -SSK22	This study
yMM1296	Wild-type STL1/P _{STL1} -yEVENUS	MATa/ α (P _{GAL10} +gal1) Δ ::loxP/ (P _{GAL10} +gal1) Δ ::loxP leu2 Δ 0::P _{ACT1} -GEV-NatMX/ leu2 Δ 0::P _{ACT1} -GEV-NatMX gal4 Δ ::LEU2/gal4 Δ ::LEU2 HAP1/HAP1 STL1/P _{STL1} -yEVENUS-HphMX	This study
yMM1298	STL1/P _{STL1} -yEVENUS P _{GAL1} -YPD1/YPD1	MATa/ α (P _{GAL10} +gal1) Δ ::loxP/ (P _{GAL10} +gal1) Δ ::loxP leu2 Δ 0::P _{ACT1} -GEV-NatMX/ leu2 Δ 0::P _{ACT1} -GEV-NatMX gal4 Δ ::LEU2/gal4 Δ ::LEU2 YPD1/KanMX-P _{GAL1} -YPD1 STL1/P _{STL1} -yEVENUS-HphMX	This study
yMM1300	STL1/P _{STL1} -yEVENUS P _{GAL1} -SSK1/SSK1	MAT a/ α (P _{GAL10} +gal1) Δ ::loxP/ (P _{GAL10} +gal1) Δ ::loxP leu2 Δ 0::P _{ACT1} -GEV-NatMX/ leu2 Δ 0::P _{ACT1} -GEV-NatMX gal4 Δ ::LEU2/gal4 Δ ::LEU2 SSK1/KanMX-P _{GAL1} -SSK1 STL1/P _{STL1} -yEVENUS-HphMX	This study
yMM1301	STL1/P _{STL1} -yEVENUS P _{GAL1} -SLN1/SLN1	MAT a/ α (P _{GAL10} +gal1) Δ ::loxP/ (P _{GAL10} +gal1) Δ ::loxP leu2 Δ 0::P _{ACT1} -GEV-NatMX/ leu2 Δ 0::P _{ACT1} -GEV-NatMX gal4 Δ ::LEU2/gal4 Δ ::LEU2 SLN1/KanMX-P _{GAL1} -SLN1 STL1/P _{STL1} -yEVENUS-HphMX	This study
yMM1304	STL1/P _{STL1} -yEVENUS P _{GAL1} -PBS2/PBS2	MAT a/ α (P _{GAL10} +gal1) Δ ::loxP/ (P _{GAL10} +gal1) Δ ::loxP leu2 Δ 0::P _{ACT1} -GEV-NatMX/ leu2 Δ 0::P _{ACT1} -GEV-NatMX gal4 Δ ::LEU2/gal4 Δ ::LEU2 PBS2/KanMX-P _{GAL1} -PBS2 STL1/P _{STL1} -yEVENUS-HphMX	This study
yMM1305	STL1/P _{STL1} -yEVENUS P _{GAL1} -SSK22/SSK22	MAT a/ α (P _{GAL10} +gal1) Δ ::loxP/ (P _{GAL10} +gal1) Δ ::loxP leu2 Δ 0::P _{ACT1} -GEV-NatMX/ leu2 Δ 0::P _{ACT1} -GEV-NatMX gal4 Δ ::LEU2/gal4 Δ ::LEU2 SSK22/KanMX-P _{GAL1} -SSK22 STL1/P _{STL1} -yEVENUS-HphMX	This study
yMM1313	[P _{GAL1} -PBS2 scURA3 2 μ]	Mata α (P _{GAL10} +gal1) Δ ::loxP, gal4 Δ ::LEU2, HAP1 leu2 Δ 0::P _{ACT1} -GEV-NatMX ura3 Δ ::HphMX [pMM330 P _{GAL1} -PBS2 scURA3 2 μ]	This study
yMM1314	[P _{GAL1} -SSK22 scURA3 2 μ]	Mata α (P _{GAL10} +gal1) Δ ::loxP, gal4 Δ ::LEU2, HAP1 leu2 Δ 0::P _{ACT1} -GEV-NatMX ura3 Δ ::HphMX [pMM331 P _{GAL1} -SSK22 scURA3 2 μ]	This study
yMM1315	[P _{GAL1} -SLN1 scURA3 2 μ]	Mata α (P _{GAL10} +gal1) Δ ::loxP, gal4 Δ ::LEU2, HAP1 leu2 Δ 0::P _{ACT1} -GEV-NatMX ura3 Δ ::HphMX [pMM332 P _{GAL1} -SLN1 scURA3 2 μ]	This study
yMM1316	[P _{GAL1} -YPD1 scURA3 2 μ]	Mata α (P _{GAL10} +gal1) Δ ::loxP, gal4 Δ ::LEU2, HAP1 leu2 Δ 0::P _{ACT1} -GEV-NatMX ura3 Δ ::HphMX4 [pMM333 P _{GAL1} -YPD1 scURA3 2 μ]	This study
yMM1317	[P _{GAL1} -SSK1 scURA3 2 μ]	Mata α (P _{GAL10} +gal1) Δ ::loxP, gal4 Δ ::LEU2, HAP1 leu2 Δ 0::P _{ACT1} -GEV-NatMX ura3 Δ ::HphMX4 [pMM334 P _{GAL1} -SSK1 scURA3 2 μ]	This study
yMM1318	[P _{GAL1} scURA3 2 μ]	Mata α (P _{GAL10} +gal1) Δ ::loxP, gal4 Δ ::LEU2, HAP1 leu2 Δ 0::P _{ACT1} -GEV-NatMX ura3 Δ ::HphMX4 [pMM329 P _{GAL1} scURA3 2 μ]	This study
yMM1333	ssk1 Δ	(P _{GAL10} +gal1) Δ ::loxP gal4 Δ ::LEU2 HAP1 leu2 Δ 0::P _{ACT1} -GEV-NatMX ura3 Δ ::HphMX ssk1::KanMX	This study
yMM1335	ssk1 Δ [P _{GAL1} scURA3 2 μ]	(P _{GAL10} +gal1) Δ ::loxP gal4 Δ ::LEU2 HAP1 leu2 Δ 0::P _{ACT1} -GEV-NatMX ura3 Δ ::HphMX ssk1::KanMX [pMM329 P _{GAL1} scURA3 2 μ]	This study
yMM1338	ssk1 Δ [P _{GAL1} -SLN1 scURA3 2 μ]	(P _{GAL10} +gal1) Δ ::loxP gal4 Δ ::LEU2 HAP1 leu2 Δ 0::P _{ACT1} -GEV-NatMX ura3 Δ ::HphMX ssk1::KanMX [pMM332 P _{GAL1} -SLN1 scURA3 2 μ]	This study

Table S1: Yeast strains used in this study.

Plasmid ID	Alias	Description	Reference
pMM012	pRS426	scURA3 2 μ	Sikorski and Heiter, 1989
pMM131	pFA6-KanMX	KanMX	Goldstein and McCusker, 1999
pMM280	γ Venus tag	γ EVenus HphMX	This study
pMM329	P _{GAL1} Empty	P _{GAL1} scURA3 2 μ	This study
pMM330	P _{GAL1} -PBS2	P _{GAL1} -PBS2 scURA3 2 μ	This study
pMM331	P _{GAL1} -SSK22	P _{GAL1} -SSK22 scURA3 2 μ	This study
pMM332	P _{GAL1} -SLN1	P _{GAL1} -SLN1 scURA3 2 μ	This study
pMM333	P _{GAL1} -YPD1	P _{GAL1} -YPD1 scURA3 2 μ	This study
pMM334	P _{GAL1} -SSK1	P _{GAL1} -SSK1 scURA3 2 μ	This study

Table S2: Plasmids used in this study.