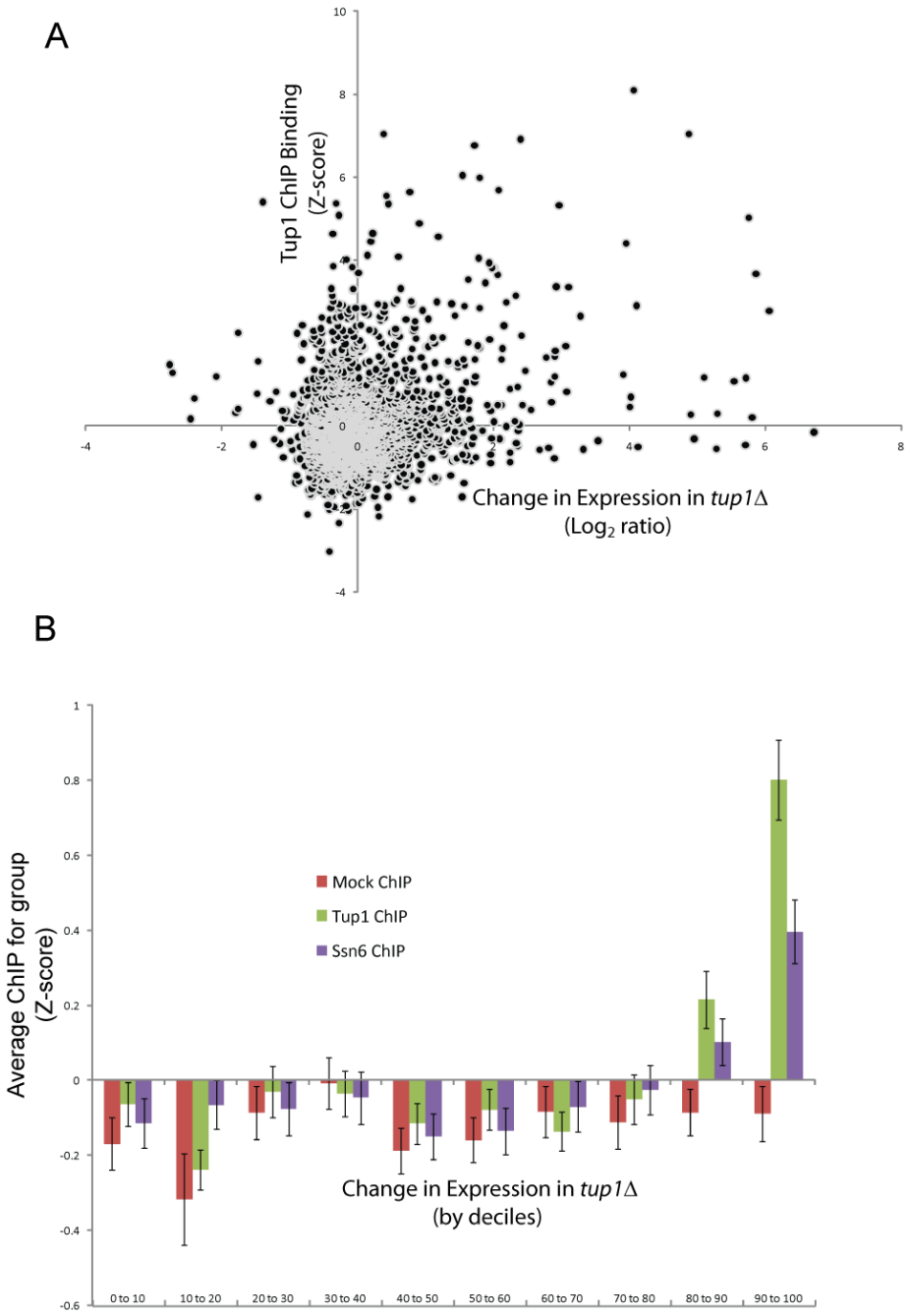
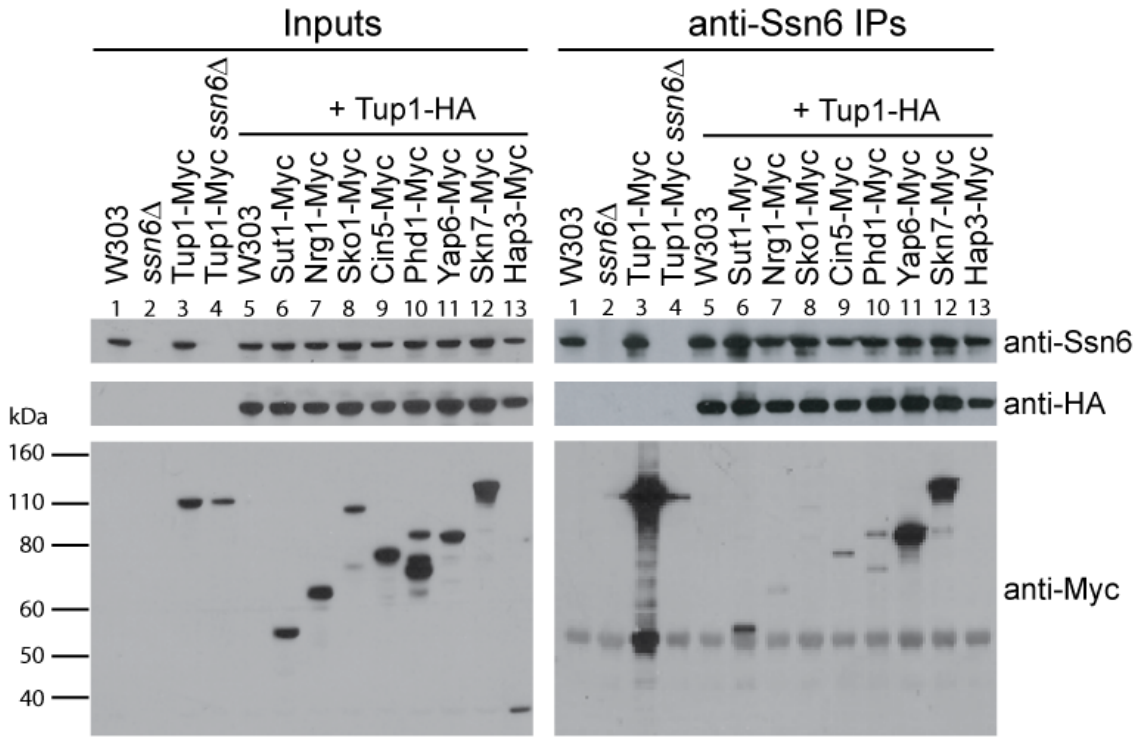
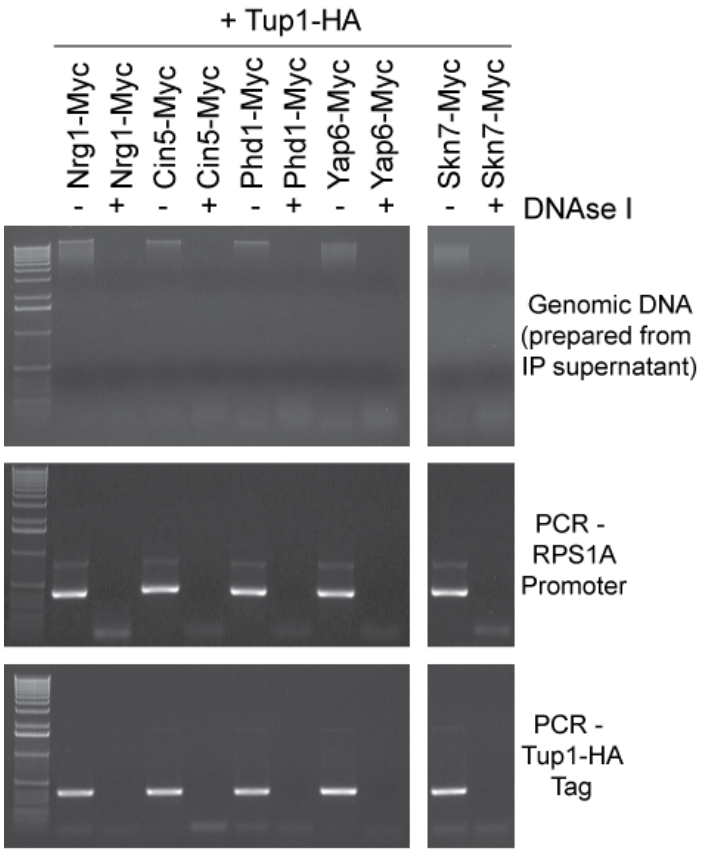


Supplemental Figure 1. Genes derepressed in a *tup1*Δ strain are bound by Tup1. **(A)** Tup1 ChIP-chip data at single promoters are plotted versus derepression of the downstream genes in a *tup1*Δ strain [1]. **(B)** All genes were sorted into 10 bins depending on the degree to which they were derepressed in a *tup1*Δ strain [1]. The most derepressed genes are in the "90-100" bin the average Tup1, Ssn6, and Mock ChIP signal for unidirectional promoter genes in each bin is shown. Deciles



Supplemental Figure 2. Tup1 interacts with the known Tup1 recruiters Sut1, Nrg1, or Sko1. This figure is a longer exposure for the same blot shown in Figure 4B. Strains carrying Myc-tagged predicted recruiters (Cin5, Phd1, Yap6, or Skn7), characterized recruiters (Sut1, Nrg1, or Sko1), or a protein which was not predicted to interact with Tup1 (Hap3) were immunoprecipitated with anti-Ssn6 antibodies, anti-HA antibody (to detect Tup1), and anti-MYC (to detect recruiter proteins).



Supplemental Figure 3. Characterization of DNAse I-treated Co-IP experiments. Top, Genomic DNA isolated from the supernatant of Co-IP experiments in the presence or absence of DNAse I. Middle and bottom, To show digestion of the DNA, PCR was performed using genomic DNA prepared from the TOP panel as a template. The ability to amplify through small regions (~400 bp) in the *RPS1A* gene (middle) and *Tup1-HA* tagged region (bottom) were examined.

Supplemental Table 1- Strains used in this study

Strain	Genotype	Source
BY4741	MATa his3Δ1 leu2Δ0 met15Δ0 ura3Δ0	
BY4742	MATalpha his3Δ1 leu2Δ0 lys2Δ0 ura3Δ0	
SHy028	MATa his3Δ1 leu2Δ0 met15Δ0 ura3Δ0 Tup1-TAP::HIS3	Ghaemmaghami et al.
SHy048	MATalpha his3Δ1 leu2Δ0 met15Δ0 ura3Δ0 Tup1-TAP::HIS3	This Study
SHy061	SHy028 but aft1Δ::KanMX6	This Study
SHy062	SHy028 but rfx1Δ::KanMX6	This Study
SHy063	SHy028 but mig1Δ::KanMX6	This Study
SHy064	SHy028 but nrg1Δ::KanMX6	This Study
SHy065	SHy028 but rox1Δ::KanMX6	This Study
SHy066	SHy028 but sko1Δ::KanMX6	This Study
SHy067	SHy028 but sut1Δ::KanMX6	This Study
W303a	MATa leu2-3,112 trp1-1 can1-100 ura3-1 ade2-1 his3-11,15 phi+	
Z1451	W303a but Cin5-myc::TRP1	Harbison et al.
Z1334	W303a but Phd1-myc::TRP1	Harbison et al.
Z1365	W303a but Skn7-myc::TRP1	Harbison et al.
Z1541	W303a but Yap6-myc::TRP1	Harbison et al.
Z1533	W303a but Sko1-myc::TRP1	Harbison et al.
Z1744	W303a but Sut1-myc::TRP1	Harbison et al.
Z1535	W303a but Nrg1-myc::TRP1	Harbison et al.
Z1522	W303a but Gts1-myc::TRP1	Harbison et al.
Z1450	W303a but Hap3-myc::TRP1	Harbison et al.
SHy162	W303a but Tup1-myc::hphNT1	This Study
SHy163	W303a but ssn6Δ::KanMX6	This Study
SHy164	W303a but Tup1-myc::hphNT1 ssn6Δ::KanMX6	This Study
SHy165	W303a but Tup1-HA::natNT2	This Study
SHy166	W303a but Sut1-myc::TRP1 Tup1-HA::natNT2	This Study
SHy167	W303a but Nrg1-myc::TRP1 Tup1-HA::natNT2	This Study
SHy168	W303a but Sko1-myc::TRP1 Tup1-HA::natNT2	This Study
SHy169	W303a but Cin5-myc::TRP1 Tup1-HA::natNT2	This Study
SHy170	W303a but Phd1-myc::TRP1 Tup1-HA::natNT2	This Study
SHy171	W303a but Yap6-myc::TRP1 Tup1-HA::natNT2	This Study
SHy172	W303a but Skn7-myc::TRP1 Tup1-HA::natNT2	This Study
SHy174	W303a but Hap3-myc::TRP1 Tup1-HA::natNT2	This Study
SHy175	W303a but Tup1-HA::natNT2 ssn6Δ::KanMX6	This Study
SHy176	W303a but Sut1-myc::TRP1 Tup1-HA::natNT2 ssn6Δ::KanMX6	This Study
SHy177	W303a but Phd1-myc::TRP1 Tup1-HA::natNT2 ssn6Δ::KanMX6	This Study
SHy178	W303a but Yap6-myc::TRP1 Tup1-HA::natNT2 ssn6Δ::KanMX6	This Study
SHy179	W303a but Skn7-myc::TRP1 Tup1-HA::natNT2 ssn6Δ::KanMX6	This Study
SHy183	W303a but Nrg1-myc::TRP1 Tup1-HA::natNT2 ssn6Δ::KanMX6	This Study
SHy184	W303a but Cin5-myc::TRP1 Tup1-HA::natNT2 ssn6Δ::KanMX6	This Study

References

1. Green SR, Johnson AD (2004) Promoter-dependent roles for the Srb10 cyclin-dependent kinase and the Hda1 deacetylase in Tup1-mediated repression in Saccharomyces cerevisiae. Mol Biol Cell 15: 4191-4202.