

Supplementary Table 6.

Yeast Strains used in Moehle *et al.* “The Yeast SR-like Protein Npl3 Links Chromatin Modification to mRNA processing”

Strain	Genotype	Notes
YTK59	<i>MATa his3Δ1 leu2Δ0 met15Δ0 ura3Δ0</i>	A
YTK219	<i>MATa/α; his3Δ1/his3Δ1 leu2Δ0/leu2Δ0 LYS2/lys2 met15Δ0/met15Δ0 uraΔ0/uraΔ0 can1Δ::STE2pr-SpHIS5/CAN1 lyp1Δ::STE3pr-LEU2/LYP1 CHY2/chy2</i>	B
YTK232D	<i>npl3Δ::NatNT2 MATa; leu2Δ0 met15Δ0 ura3Δ0 can1Δ::STE2pr-SpHIS5 lyp1Δ::STE3pr-LEU2 chy2</i>	C
YTK234D	<i>npl3Δ::NatNT2 MATa his3Δ1 leu2Δ0 lys2Δ0 ura3Δ0</i>	C
N/A	<i>X::KanMX4 MATa his3Δ1 leu2Δ0 ura3Δ0 met15Δ0</i>	D
YM1740	<i>bre1Δ::KanMX4 MATa his3Δ1 leu2Δ0 ura3Δ0 met15Δ0</i>	E
YM1739	<i>rad6Δ::KanMX4 MATa his3Δ1 leu2Δ0 ura3Δ0 met15Δ0</i>	E
YM1741	<i>lge1Δ::KanMX4 MATa his3Δ1 leu2Δ0 ura3Δ0 met15Δ0</i>	E
EMy5	<i>paf1Δ::KanMX4 MATa his3Δ1 leu2Δ0 lys2Δ0 ura3Δ0</i>	F
EMy8	<i>htz1Δ::KanMX4 MATa his3Δ1 leu2Δ0 lys2Δ0 ura3Δ0</i>	F
EMy11	<i>swr1Δ::KanMX4 MATa his3Δ1 leu2Δ0 lys2Δ0 ura3Δ0</i>	F
EMy14	<i>vps72Δ::KanMX4 MATa his3Δ1 leu2Δ0 lys2Δ0 ura3Δ0</i>	F
EMy456	<i>set1Δ::KanMX4 MATa his3Δ1 leu2Δ0 lys2Δ0 ura3Δ0</i>	F
YTK391B	<i>npl3Δ::NatNT2 bre1Δ::KanMX4 his3Δ1 leu2Δ0 ura3Δ0</i>	G
EMy415	<i>npl3Δ::NatNT2 rad6Δ::KanMX4 his3Δ1 leu2Δ0 ura3Δ0</i>	G
YTK537A	<i>npl3Δ::NatNT2 cdc73Δ::KanMX4 his3Δ1 leu2Δ0 ura3Δ0</i>	G
YTK538A	<i>npl3Δ::NatNT2 leo1Δ::KanMX4 his3Δ1 leu2Δ0 ura3Δ0</i>	G
YTK551A	<i>npl3Δ::NatNT2 spt3Δ::KanMX4 his3Δ1 leu2Δ0 ura3Δ0</i>	G
YTK552A	<i>npl3Δ::NatNT2 spt8Δ::KanMX4 his3Δ1 leu2Δ0 ura3Δ0</i>	G
YTK554A	<i>npl3Δ::NatNT2 ada2Δ::KanMX4 his3Δ1 leu2Δ0 ura3Δ0</i>	G
EMy460	<i>npl3Δ::NatNT2 set1Δ::KanMX4 his3Δ1 leu2Δ0 lys2Δ0 ura3Δ0</i>	G
YTK736A	<i>npl3Δ::NatNT2 spp1Δ::KanMX4 his3Δ1 leu2Δ0 ura3Δ0</i>	G
YTK737A	<i>npl3Δ::NatNT2 sdc1Δ::KanMX4 his3Δ1 leu2Δ0 ura3Δ0</i>	G
YTK550A	<i>npl3Δ::NatNT2 rad18Δ::KanMX4 his3Δ1 leu2Δ0 ura3Δ0</i>	G
YTK245A	<i>npl3Δ::NatNT2 rrp6Δ::KanMX4 his3Δ1 leu2Δ0 ura3Δ0</i>	G
YTK429A	<i>npl3Δ::NatNT2 set3Δ::KanMX4 his3Δ1 leu2Δ0 ura3Δ0</i>	G
YTK533A	<i>npl3Δ::NatNT2 ubp8Δ::KanMX4 his3Δ1 leu2Δ0 ura3Δ0</i>	G
YTK534A	<i>npl3Δ::NatNT2 sgf11Δ::KanMX4 his3Δ1 leu2Δ0 ura3Δ0</i>	G
YTK303	<i>npl3Δ::NatNT2 sgf29Δ::KanMX4 his3Δ1 leu2Δ0 ura3Δ0</i>	G
YTK749A	<i>npl3Δ::NatNT2 ctk1Δ::KanMX4 his3Δ1 leu2Δ0 ura3Δ0</i>	G
YTK535B	<i>npl3Δ::NatNT2 set2Δ::KanMX4 his3Δ1 leu2Δ0 ura3Δ0</i>	G
YTK557A	<i>npl3Δ::NatNT2 eaf3Δ::KanMX4 his3Δ1 leu2Δ0 ura3Δ0</i>	G
YTK333	<i>npl3Δ::NatNT2 rco1Δ::KanMX4 his3Δ1 leu2Δ0 ura3Δ0</i>	H
YTK553A	<i>npl3Δ::NatNT2 chd1Δ::KanMX4 his3Δ1 leu2Δ0 ura3Δ0</i>	G
YTK735A	<i>npl3Δ::NatNT2 ckb2Δ::KanMX4 his3Δ1 leu2Δ0 ura3Δ0</i>	G
YTK558A	<i>npl3Δ::NatNT2 eaf7Δ::KanMX4 his3Δ1 leu2Δ0 ura3Δ0</i>	G
YTK348	<i>npl3Δ::NatNT2 dst1Δ::KanMX4 his3Δ1 leu2Δ0 ura3Δ0</i>	G
YTK315	<i>npl3Δ::NatNT2 hst1Δ::KanMX4 his3Δ1 leu2Δ0 ura3Δ0</i>	H
YTK331	<i>npl3Δ::NatNT2 tho2Δ::KanMX4 his3Δ1 leu2Δ0 ura3Δ0</i>	H
WHY334	“HTB1” <i>HTB1 htb2Δ::hygX41 MATa his3Δ leu2Δ ura3Δ (note: wild-type strain for WHY326)</i>	I

WHY326	<i>“htb1K123R” htb1K123R htb2Δ::hygX4l MATa his3Δ leu2Δ ura3Δ</i>	I
YTK396A	<i>“npl3ΔHTB1” HTB1 htb2Δ::hygX4l npl3Δ::NatNT2 his3Δ0 leu2Δ0 ura3Δ0</i>	J
YTK397A	<i>“npl3Δhtb1K123R” htb1K123R htb2Δ::hygX4l npl3Δ::NatNT2 his3Δ leu2Δ ura3Δ</i>	J
YTK572	<i>H3K36A” hht2K4A-HHF2-URA3 hht1-hhf1::NatMX MATa his3Δ200 leu2Δ1 lys2Δ0 met15Δ0 trp1Δ63 ura3-167 ade2::hisG RDN1::Ty1-MET15 TelV::ADE2</i>	K
YTK575	<i>H3K36A” hht2K36A-HHF2-URA3 hht1-hhf1::NatMX MATa his3Δ200 leu2Δ1 lys2Δ0 met15Δ0 trp1Δ63 ura3-167 ade2::hisG RDN1::Ty1-MET15 TelV::ADE2</i>	K
YTK576	<i>“H3K79A” hht2K79A-HHF2-URA3 hht1-hhf1::NatMX MATa his3Δ200 leu2Δ1 lys2Δ0 met15Δ0 trp1Δ63 ura3-167 ade2::hisG RDN1::Ty1-MET15 TelV::ADE2</i>	K
EMy99	<i>npl3Δ::KanMX4 hht2K4A-HHF2-URA3 hht1-hhf1::NatMX MATa his3Δ200 leu2Δ1 lys2Δ0 met15Δ0 trp1Δ63 ura3-167 ade2::hisG RDN1::Ty1-MET15 TelV::ADE2</i>	L
EMy94	<i>npl3Δ::KanMX4 hht2K36A-HHF2-URA3 hht1-hhf1::NatMX MATa his3Δ200 leu2Δ1 lys2Δ0 met15Δ0 trp1Δ63 ura3-167 ade2::hisG RDN1::Ty1-MET15 TelV::ADE2</i>	L
EMy102	<i>npl3Δ: KanMX4 hht2K79A-HHF2-URA3 hht1-hhf1::NatMX MATa his3Δ200 leu2Δ1 lys2Δ0 met15Δ0 trp1Δ63 ura3-167 ade2::hisG RDN1::Ty1-MET15 TelV::ADE2</i>	L
YTK609	<i>MATa Magic Marker strain his3Δ1 leu2Δ0 LYS2+met15Δ0 ura3Δ0 can1Δ::STE2pr-SpHIS5 lyp1Δ::STE3pr-LEU2</i>	M
YTK660A	<i>mud1Δ::NatNT2 MATa can1Δ::STE2pr-SpHIS5 lyp1Δ::STE3pr-LEU2 his3Δ1 leu2Δ0 uraΔ0</i>	N
YTK661	<i>nam8Δ::NatNT2 MATa can1Δ::STE2pr-SpHIS5 lyp1Δ::STE3pr-LEU2 his3Δ1 leu2Δ0 uraΔ0</i>	N
YTK662A	<i>cus2Δ::NatNT2 MATa can1Δ::STE2pr-SpHIS5 lyp1Δ::STE3pr-LEU2 his3Δ1 leu2Δ0 uraΔ0</i>	N
YTK663A	<i>mud2Δ::NatNT2 MATa can1Δ::STE2pr-SpHIS5 lyp1Δ::STE3pr-LEU2 his3Δ1 leu2Δ0 uraΔ0</i>	N
YTK664A	<i>isy1Δ::NatNT2 MATa can1Δ::STE2pr-SpHIS5 lyp1Δ::STE3pr-LEU2 his3Δ1 leu2Δ0 uraΔ0</i>	N
YTK649	<i>snu66Δ::NatNT2 MATa can1Δ::STE2pr-SpHIS5 lyp1Δ::STE3pr-LEU2 his3Δ1 leu2Δ0 uraΔ0</i>	N
YTK722A	<i>mud1Δ::NatNT2 ubp8Δ::KanMX4 MATa can1Δ::STE2pr-SpHIS5 lyp1Δ::STE3pr-LEU2 his3Δ1 leu2Δ0 uraΔ0</i>	O
YTK723A	<i>nam8Δ::NatNT2 ubp8Δ::KanMX4 MATa can1Δ::STE2pr-SpHIS5 lyp1Δ::STE3pr-LEU2 his3Δ1 leu2Δ0 uraΔ0</i>	O
YTK724B	<i>mud2Δ::NatNT2 ubp8Δ::KanMX4 MATa can1Δ::STE2pr-SpHIS5 lyp1Δ::STE3pr-LEU2 his3Δ1 leu2Δ0 uraΔ0</i>	O
YTK725A	<i>cus2Δ::NatNT2 ubp8Δ::KanMX4 MATa can1Δ::STE2pr-SpHIS5 lyp1Δ::STE3pr-LEU2 his3Δ1 leu2Δ0 uraΔ0</i>	O
YTK726A	<i>isy1Δ::NatNT2 ubp8Δ::KanMX4 MATa can1Δ::STE2pr-SpHIS5 lyp1Δ::STE3pr-LEU2 his3Δ1 leu2Δ0 uraΔ0</i>	O
YTK727A	<i>snu66Δ::NatNT2 ubp8Δ::KanMX4 MATa can1Δ::STE2pr-SpHIS5 lyp1Δ::STE3pr-LEU2 his3Δ1 leu2Δ0 uraΔ0</i>	O
YTK35	<i>MATa his3Δ1 leu2Δ0 ura3Δ0 met15Δ0</i>	A
EMy32	<i>bre1Δ::NatNT2 MATa his3Δ1 leu2Δ0 ura3Δ0 met15Δ0</i>	P
EMy442	<i>ubp8Δ::NatNT2 MATa his3Δ1 leu2Δ0 ura3Δ0 met15Δ0</i>	P
EMy489	<i>bre1Δ::NatNT2 nam8Δ::KanMX4 his3Δ1 leu2Δ0 ura3Δ0 met15Δ0</i>	G
EMy54	<i>bre1Δ::NatNT2 mud1Δ::KanMX4 his3Δ1 leu2Δ0 ura3Δ0 met15Δ0</i>	G

EMy76	<i>bre1Δ::NatNT2 mud2Δ::KanMX4 his3Δ1 leu2Δ0 ura3Δ0 met15Δ0</i>	G
EMy70	<i>bre1Δ::NatNT2 cus2Δ::KanMX4 his3Δ1 leu2Δ0 ura3Δ0 met15Δ0</i>	G
EMy81	<i>bre1Δ::NatNT2 lea1Δ::KanMX4 his3Δ1 leu2Δ0 ura3Δ0 met15Δ0</i>	G
EMy60	<i>bre1Δ::NatNT2 isy1Δ::KanMX4 his3Δ1 leu2Δ0 ura3Δ0 met15Δ0</i>	G
EMy480	<i>bre1Δ::NatNT2 snu66Δ::KanMX4 his3Δ1 leu2Δ0 ura3Δ0 met15Δ0</i>	G
EMy447	<i>ubp8Δ::NatNT2 lea1Δ::KanMX4 his3Δ1 leu2Δ0 ura3Δ0 met15Δ0</i>	G
WHY8	<i>3xHA-Bre1 (N-term) his3Δ1 leu2Δ0 ura3Δ0 met15Δ0 lys2Δ0</i>	I
N/A	<i>X-GFP::HIS3MX MATa his3Δ1 leu2Δ0 met15Δ02 ura3Δ0</i>	Q
YTK86	<i>NPL3 MATa his3Δ1 leu2Δ0 met15Δ0 ura3Δ0</i>	R
YTK87	<i>npl3S411A MATa his3Δ1 leu2Δ0 met15Δ0 ura3Δ0</i>	R

All strains are in the consortium background.

Notes:

A= Wild-type strains derived from BY4741 and BY4742 [1].

B= SGA Diploid derived from strains in [2].

C= Made by replacement of *NPL3* using techniques described by [3]. For YTK232D, this was done in YTK219, and this was followed by sporulation and selection for NAT and “magic markers.” For YTK234D see [4]. Loss of *NPL3* expression was confirmed by Western blot for Npl3. YTK234D was not tested for MET/TRP markers. YTK232D was also used as a query strain in the RNA-processing E-MAP [5].

D= From KanMX4-marked MATa deletion collection [6] (OpenBiosystems www.openbiosystems.com formerly Research Genetics) *X= ubp8Δ, sgf11Δ, sgf29Δ, gcn5Δ, spt3Δ, spt8Δ, ada2Δ, eaf3Δ, chd1Δ, leo1Δ, set3Δ, spp1Δ, sdc1Δ, nam8Δ, mud1Δ, mud2Δ, cus2Δ, lea1Δ, isy1Δ, snu66Δ, cdc73Δ, gbp2Δ, tho2Δ, rad18Δ, rrp6Δ, dst1Δ, ctk1Δ, set2Δ, rco1Δ, ckb2Δ, hst1Δ, and eaf7Δ*. PCR-validated for knockout chromosome.

E= Validated by Bill Hwang [7].

F= Wild-type ORF in YTK59 was replaced with KanMX4 using techniques from [3]. PCR-validated for knockout chromosome.

G= KanMX4-marked single mutant was mated to YTK234D (*npl3Δ::NatNT2*), EMy32 (*bre1Δ::NatNT2*), or EMy447 (*ubp8Δ::NatNT2*) and double mutant haploid was isolated using tetrad dissection. Note: unless noted, segregation of LYS, MET and TRP markers was not tested.

H= KanMX4-marked single mutant was mated to YTK234D and double mutant haploid was isolated using random sporulation. Note: segregation of LYS, MET and TRP markers was not tested.

I= Gift from Bill Hwang and Hiten Madhani.

J= YTK234D was mated to WHY334 and WHY326 and diploids were selected on YEPD + 100μg/mL hygromycin + 100μg/mL clonNAT. Following sporulation and tetrad dissection, the *htb1* gene was sequenced for the *htb1K123R* mutation and a Western blot was performed to confirm the absence of Npl3.

K= From histone H3/H4 point mutant collection [8].

L= Made by replacement of the *NPL3* ORF with KanMX4 in the H3 point mutant strains (EMy 94, 99, and 102) using techniques described in [3]. PCR validated for knockout chromosome.

M= a gift from Dale Cameron [9].

N= Starting with the cognate strains from the KanMX4-marked MATa collection [6], the KanMX4 ORF was replaced with the NatNT2 ORF. The resulting strains were crossed to YTK609 and MATa “magic-marker” single mutants were isolated on haploid selection medium [SD medium lacking leucine and arginine but containing canavanine and s-AEC

:SD - LEU/Arg + canavanine (100µg/ml)+ S-(2-Aminoethyl)-L-cysteine hydrochloride (100µg/ml) plus and clonNAT (100µg/mL clonNAT).
 O= The *ubp8Δ::KanMX4* strain from [6] was mated to the NatNT2-marked, “magic marked” splicing factor strains. MATa double mutant haploids were isolated by tetrad dissection.
 P= Wild-type ORF knocked out in YTK35 with NatNT2 using techniques from [3]. PCR-validated for knockout chromosome.
 Q= From MATa GFP-tagged collection [10] (Invitrogen www.invitrogen.com) X=*LUC7*, *RAD6*, *UBP8*, *SGF11*, and *SGF29*.
 R= Unmarked NPL3 or npl3S411A alleles. From [11].

References:

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