

Supplemental Figures

Table S4. *S. pombe* strains used in this study.

Strain	Genotype	Reference
JW81	<i>h- ade6-M210 leu1-32 ura4-D18</i>	(Wu <i>et al.</i> , 2003)
AJB603	<i>h- ade6-M210 leu1-32 ura4-D18 pJK148::leu1+</i>	(Ehrensberger <i>et al.</i> , 2013)
AJB386	<i>h+ ade6-M210 leu1-32 ura4-D18 loz1Δ::kanMX4 pJK148::leu1+</i>	(Corkins <i>et al.</i> , 2013)
AJB450	<i>h- ade6-M210 leu1-32 ura4-D18 loz1Δ::kanMX4 ploz1-GFP::leu1+</i>	(Corkins <i>et al.</i> , 2013)
AJB965	<i>h+ ade6-M210 leu1-32 ura4-D18 SPAC25B8.19cΔ::kanMX6</i>	(Corkins <i>et al.</i> , 2013)
AJB860	<i>h- ade6-M210 leu1-32 ura4-D18 pJK148::leu1+ pTN215-lacZ::ade6+</i>	(Ehrensberger <i>et al.</i> , 2014)
AJB876	<i>h+ ade6-M210 leu1-32 ura4-D18 loz1Δ::kanMX4 pJK148::leu1+ zrt1-lacZ::ade6+</i>	(Ehrensberger <i>et al.</i> , 2014)
AJB877	<i>h- ade6-M210 leu1-32 ura4-D18 loz1Δ::kanMX4 ploz1-GFP::leu1+ zrt1-lacZ::ade6+</i>	(Ehrensberger <i>et al.</i> , 2014)
AJB98	<i>h- ade6-M210 leu1-32 ura4-D18 pSPBC1348.06c-lacZ::leu1+</i>	(Ehrensberger <i>et al.</i> , 2013)
AJB395	<i>h+ ade6-M210 leu1-32 ura4-D18 loz1Δ::kanMX4 pSPBC1348.06c-lacZ::leu1+</i>	(Corkins <i>et al.</i> , 2013)
AJB1115	<i>h- ade6-M210 leu1-32 ura4-D18 JK148 gcd1-lacZ::leu1+</i>	(Corkins <i>et al.</i> , 2017)
AJB1095	<i>h- ade6-M216 leu1-32 ura4-D18 loz1Δ::kanMX6 JK148- gcd1-lacZ::leu1+</i>	(Corkins <i>et al.</i> , 2017)
AJB436	<i>h- ade6-M210 leu1-32 ura4-D18 loz1Δ::kanMX4 pgk1^{ΔTATA} -loz1-GFP::leu1+</i>	This study
AJB1586	<i>h? ade6-? leu1-32 ura4-D18 loz1Δ::kanMX6 pgk1^{ΔTATA} -loz1-GFP::leu1+ zrt1-lacZ::ade6+</i>	This study
AJB789	<i>h+ ade6-M210 leu1-32 ura4-D18 loz1Δ::kanMX6 pSPBC1348.06c(LRE#3mut)-lacZ::leu1+</i>	This study
AJB790	<i>h+ ade6-M210 leu1-32 ura4-D18 loz1Δ::kanMX6 pSPBC1348.06c(LRE#1mut)-lacZ::leu1+</i>	This study
AJB799	<i>h- ade6-M210 leu1-32 ura4-D18 pSPBC1348.06c(LRE#1,3mut)-lacZ::leu1+</i>	This study
AJB821	<i>h- ade6-M210 leu1-32 ura4-D18 pSPBC1348.06c(LRE#2mut)-lacZ::leu1+</i>	This study
AJB1236	<i>h? ade6-? leu1-32 ura4-D18 loz1Δ::kanMX6 pSPBC1348.06c(LRE#1,2,3mut)-lacZ::leu1+</i>	This study
AJB1235	<i>h? ade6-? leu1-32 ura4-D18 loz1Δ::kanMX6 pSPBC1348.06c-lacZ::leu1+</i>	This study
AJB819	<i>h? ade6-? leu1-32 ura4-D18 pSPBC1348.06c(LRE#1,2,3mut)-lacZ::leu1+</i>	This study
AJB1492	<i>h? ade6-? leu1-32 ura4-D18 pSPBC1348.06c(LRE#1,3mut-#2LREg5a)-lacZ::leu1+</i>	This study
AJB1605	<i>h? ade6-? leu1-32 ura4-D18 pSPBC1348.06c(LRE#2,3mut)-lacZ::leu1+</i>	This study

AJB1573	<i>h- ade6-M216 leu1-32 ura4-D18 loz1Δ::kanMX6 JK148- gcd1(-317->+805-- C-296G/ A-282C)-lacZ):: leu1+</i>	This study
AJB1577	<i>h- ade6-M216 leu1-32 ura4-D18 JK148 loz1Δ::kanMX6 gcd1(-317->+805)-lacZ):: leu1+</i>	This study
AJB1560	<i>h- ade6-M216 leu1-32 ura4-D18 JK148- gcd1(-317->+805-- C-296G/ A-282C)-lacZ):: leu1+</i>	This study
AJB1561	<i>h- ade6-M216 leu1-32 ura4-D18 JK148- gcd1(-317->+805—C-296G)-lacZ :: leu1+</i>	This study
AJB1575	<i>h- ade6-M216 leu1-32 ura4-D18 JK148- gcd1(-317->+805)-lacZ):: leu1+</i>	This study
AJB1597	<i>h- ade6-M216 leu1-32 ura4-D18 JK148- gcd1(-317->+805—A-282C)-lacZ :: leu1+</i>	This study
AJB1092	<i>h- ade6-M210 leu1-32 ura4-D18 ^{Min}CYC1-TRS-lacZ::leu1+</i>	This study
AJB1142	<i>h- ade6-M210 leu1-32 ura4-D18 loz1Δ::kanMX6 ^{Min}CYC1-TRE-lacZ::leu1+</i>	This study
AJB1152	<i>h- ade6-M210 leu1-32 ura4-D18 ^{Min}CYC1-LRE-lacZ::leu1+</i>	This study
AJB524	<i>h- ade6-M210 leu1-32 ura4-D18 ^{Min}CYC1-lacZ::leu1+</i>	This study
AJB1341	<i>h- ade6-M210 leu1-32 ura4-D18 ^{Min}CYC1-2LRE-TRS-lacZ::leu1+</i>	This study
AJB1362	<i>h- ade6-M210 leu1-32 ura4-D18 ^{Min}CYC1-4LRE-TRS-lacZ::leu1+</i>	This study
AJB1384	<i>h- ade6-M210 leu1-32 ura4-D18 loz1Δ::kanMX6 ^{Min}CYC1-4LRE-TRS-lacZ::leu1+</i>	This study
AJB1406	<i>h- ade6-M210 leu1-32 ura4-D18 loz1Δ::kanMX6 ^{Min}CYC1-2LRE-TRS-lacZ::leu1+</i>	This study
AJB854	<i>h- ade6-M210 leu1-32 ura4-D18 pJK148-lacZ::leu1+</i>	This study

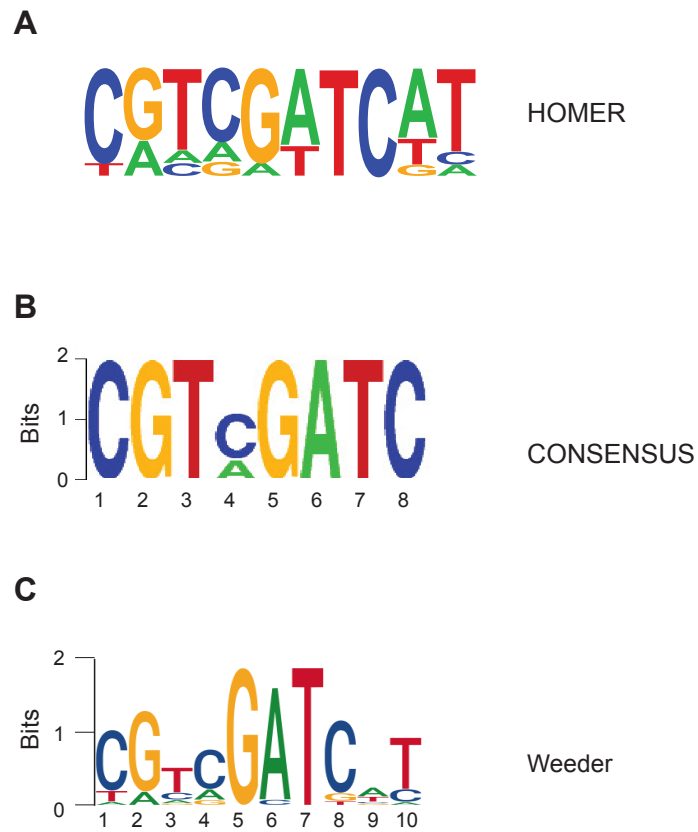


Fig. S1. Identification of conserved DNA regulatory elements in the promoter regions of Loz1 target genes.

The programs HOMER (Heinz *et al.*, 2010), CONSENSUS (Hertz & Stormo, 1999), and Weeder (Pavesi *et al.*, 2004) were used to identify regulatory DNA elements in the promoters of putative Loz1 target genes. The shown motifs were enriched in ChIP-seq peaks of the 27 genes that were repressed by Loz1 in high zinc.

A

'Competitive' 5'-TCAAAGCTAGCGC**CGTTCGATCTTA**TTGCTGGTTCA-3'

'Non-Competitive' 5'-TCAAAGCTAGCGC**GGTGGCACTTA**TTGCTGGTTCA-3'

B

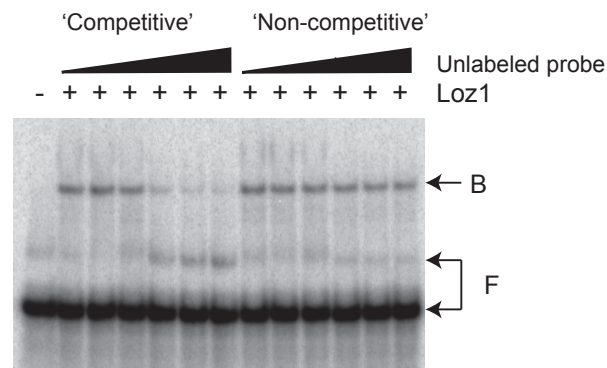


Fig. S2. Loz1 binds to the LRE element in vitro.

A. The sequence of the competitive and non-competitive probes used for EMSA. The positions of the putative LRE, and scrambled LRE are underlined and are shown bold text.

B. An EMSA of a representative competition experiment using purified Loz1⁴²⁶⁻⁵²². Where indicated purified Loz1⁴²⁶⁻⁵²² was incubated with a ³²P-labeled competitive probe, in the presence of 0, 1x, 25x, 250x, 500x, or 1000x of the unlabeled competitive, or non-competitive probe. B= bound probe DNA and F = Free probe DNA.

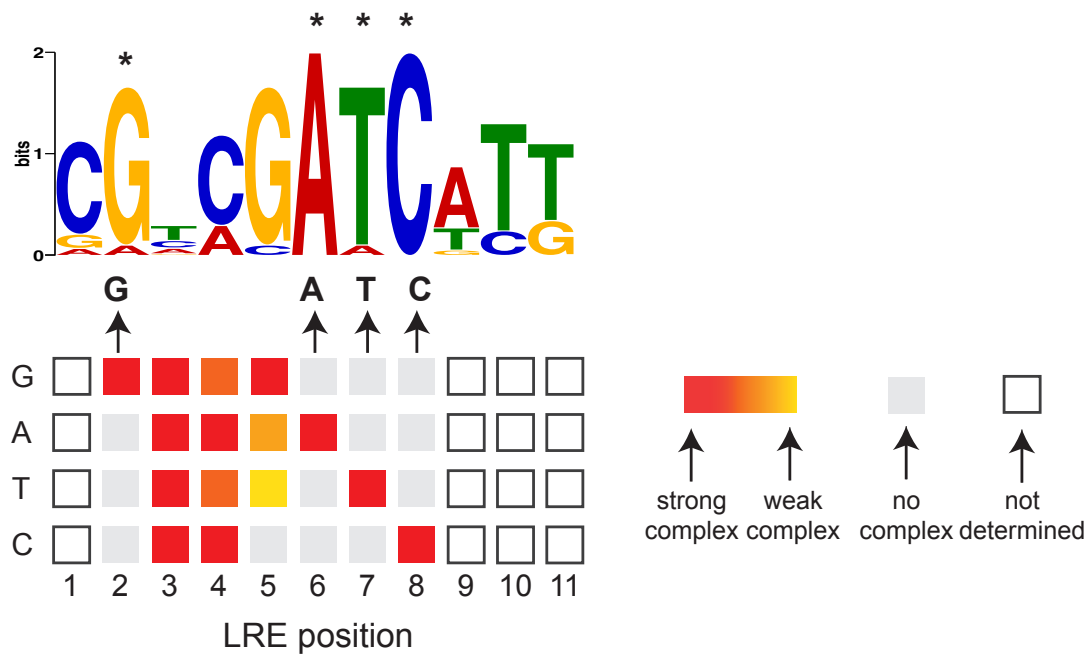


Fig. S4. Loz1 DNA binding specificity in vitro.

A plot summarizing the results obtained from the EMSA analysis from Supplemental Figure 2. The plot shows whether a strong, weak, or no Loz1⁴²⁶⁻⁵²²-DNA complex was detected with probes containing a 'G', 'A', 'T' or 'C' at the indicated LRE position. The MEME-derived LRE consensus is shown in the upper panel. Nucleotides that are critical for Loz1 DNA binding include the G at position 2 and the 'ATC' at positions 6-8, are highlighted by an asterisk in MEME-derived LRE consensus (upper panel).

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