

**Supplementary Table 1.** The detailed information of the collected ChIP-chip/**ChIP-seq** datasets of 32 histone modifications (15 histone acetylation, 13 histone methylation, 2 histone phosphorylation, 1 histone ubiquitination and 1 histone variant).

Due to the length constraint, we cannot show all the columns here.

See the complete Supplementary Table 1 at <http://cosbi4.ee.ncku.edu.tw/YHMI/suptable2>

Histone Acetylation	Data Value	Strain	Growth Condition	Reference Genome	Paper	Experimental Technology
Acetylation (H2AK5ac)	$\log_2(\text{H2AK5ac}/\text{Input})$	S288C (BY4741)	YPD	sacCer3 (R64)	Weiner et al., 2015	ChIP-seq
Acetylation (H3K4ac)	$\log_2(\text{H3K4ac}/\text{H3})$	S288C (BY4741)	YPD	sacCer3 (R64)	Guillemette et al., 2011	ChIP-chip
Acetylation (H3K9ac)	$\log_2(\text{H3K9ac}/\text{H3})$	W303a	YPD	sacCer3 (R64)	Pokholok et al., 2005	ChIP-chip
Acetylation (H3K14ac)	$\log_2(\text{H3K14ac}/\text{H3})$	W303a	YPD	sacCer3 (R64)	Pokholok et al., 2005	ChIP-chip
Acetylation (H3K14ac)	$\log_2(\text{H3K14ac}/\text{H3})$	W303a	YPD adding $\text{H}_2\text{O}_2$	sacCer3 (R64)	Pokholok et al., 2005	ChIP-chip
Acetylation (H3K18ac)	$\log_2(\text{H3K18ac}/\text{Input})$	S288C (BY4741)	YPD	sacCer3 (R64)	Weiner et al., 2015	ChIP-seq
Acetylation (H3K23ac)	$\log_2(\text{H3K23ac}/\text{Input})$	S288C (BY4741)	YPD	sacCer3 (R64)	Weiner et al., 2015	ChIP-seq
Acetylation (H3K27ac)	$\log_2(\text{H3K27ac}/\text{Input})$	S288C (BY4741)	YPD	sacCer3 (R64)	Weiner et al., 2015	ChIP-seq
Acetylation (H3K56ac)	$\log_2(\text{H3K56ac}/\text{Input})$	S288C (BY4741)	YPD	sacCer3 (R64)	Weiner et al., 2015	ChIP-seq
Acetylation (H4ac)	$\log_2(\text{H4ac}/\text{H3})$	W303a	YPD	sacCer3 (R64)	Pokholok et al., 2005	ChIP-chip
Acetylation (H4ac)	$\log_2(\text{H4ac}/\text{H3})$	W303a	YPD adding $\text{H}_2\text{O}_2$	sacCer3 (R64)	Pokholok et al., 2005	ChIP-chip

Acetylation (H4K5ac)	$\log_2(\text{H4K5ac}/\text{Input})$	S288C (BY4741)	YPD	sacCer3 (R64)	Weiner et al., 2015	ChIP-seq
Acetylation (H4K8ac)	$\log_2(\text{H4K8ac}/\text{Input})$	S288C (BY4741)	YPD	sacCer3 (R64)	Weiner et al., 2015	ChIP-seq
Acetylation (H4K12ac)	$\log_2(\text{H4K12ac}/\text{Input})$	S288C (BY4741)	YPD	sacCer3 (R64)	Weiner et al., 2015	ChIP-seq
Acetylation (H4K16ac)	$\log_2(\text{H4K16ac}/\text{Input})$	S288C (BY4741)	YPD	sacCer3 (R64)	Weiner et al., 2015	ChIP-seq

Histone Phosphorylation, Ubiquitination and Variant	Data Value	Strain	Growth Condition	Reference Genome	Paper	Experimental Technology
Phosphorylation (H2AS129ph)	$\log_2(\text{H2AS129ph}/\text{Input})$	S288C (BY4741)	YPD	sacCer3 (R64)	Weiner et al., 2015	ChIP-seq
Phosphorylation (H3S10ph)	$\log_2(\text{H3S10ph}/\text{Input})$	S288C (BY4741)	YPD	sacCer3 (R64)	Weiner et al., 2015	ChIP-seq
Ubiquitination (H2BK123ub)	MAT score (H2BK123ub/Input)	Other (SLJ001, YSN545, YSN763, YSN4, YSN18)	YPD	sacCer3 (R64)	Schulze et al., 2011	ChIP-chip
Histone Variant (H2AZ)	$\log_2(\text{H2AZ}/\text{H2B})$	Other (BGY02)	YPD	sacCer3 (R64)	Guillemette et al., 2005	ChIP-chip

Histone Methylation	Data Value	Strain	Growth Condition	Reference Genome	Paper	Experimental Technology
Methylation (H3R2me2a)	$\log_2(\text{H3R2me2a}/\text{H3})$	S288C	YPD	sacCer3 (R64)	Kirmizis et al., 2007	ChIP-chip

Methylation (H3K4me)	$\log_2(\text{H3K4me}/\text{H3})$	W303a	YPD	sacCer3 (R64)	Pokholok et al., 2005	ChIP-chip
Methylation (H3K4me2)	$\log_2(\text{H3K4me2}/\text{H3})$	W303a	YPD	sacCer3 (R64)	Pokholok et al., 2005	ChIP-chip
Methylation (H3K4me3)	$\log_2(\text{H3K4me3}/\text{H3})$	S288C	YPD	sacCer3 (R64)	Guillemette et al., 2011	ChIP-chip
Methylation (H3K36me)	$\log_2(\text{H3K36me}/\text{Input})$	S288C (BY4741)	YPD	sacCer3 (R64)	Weiner et al., 2015	ChIP-seq
Methylation (H3K36me2)	$\log_2(\text{H3K36me2}/\text{Input})$	S288C (BY4741)	YPD	sacCer3 (R64)	Weiner et al., 2015	ChIP-seq
Methylation (H3K36me3)	$\log_2(\text{H3K36me3}/\text{H3})$	W303a	YPD	sacCer3 (R64)	Pokholok et al., 2005	ChIP-chip
Methylation (H3K79me)	$\log_2(\text{H3K79me}/\text{Input})$	S288C (BY4741)	YPD	sacCer3 (R64)	Weiner et al., 2015	ChIP-seq
Methylation (H3K79me2)	<b>MAT score</b> (H3K79me2/Input)	W303	YPD	sacCer3 (R64)	Schulze et al., 2011	ChIP-chip
Methylation (H3K79me3)	MAT score (H3K79me3/Input)	W303	YPD	sacCer3 (R64)	Schulze et al., 2011	ChIP-chip
Methylation (H4R3me)	$\log_2(\text{H4R3me}/\text{Input})$	S288C (BY4741)	YPD	sacCer3 (R64)	Weiner et al., 2015	ChIP-seq
Methylation (H4R3me2s)	$\log_2(\text{H4R3me2s}/\text{Input})$	S288C (BY4741)	YPD	sacCer3 (R64)	Weiner et al., 2015	ChIP-seq
Methylation (H4K20me)	$\log_2(\text{H4K20me}/\text{Input})$	S288C (BY4741)	YPD	sacCer3 (R64)	Weiner et al., 2015	ChIP-seq

"Input" means the control experiment, which is the ChIP-chip/ChIP-seq experiment without using any anti-histone modification (e.g. anti-H3K79me2) antibody.

MAT stands for Model-based Analysis of Tiling-arrays, which is an algorithm for reliably detecting enriched regions. The higher the MAT score, the higher the enrichment.

## References

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