Supplementary Table 7: List of primers used for qChIP experiments.
For PC, PH, PSC, SU(Z)12 and E(Z) proteins:

Category	Gene	Name	Sequence
Negative controls	PGRP-LE	PGRPnasc_AS1	CTTACTCAAAACCGAAGAGATCG
		PGRPnasc_S1	CCTGGTGAATGATAGCTTACTCTG
	msta TSS/k27	Msta-k27_S	CTATGTCTCGGGTGGCAAACAC
		Msta-k27_AS	GCAGCTGATAGACGTCCACTTG
	Cp36	cp36-Ex2_s	ACTCGAGGAGTACGTGAATGTG
		cp36-Ex2_as	TATCCTCGGAGTTCTTCAGCTT
Canonical targets	AntP	AntpPRE1_sens	TGGCCGAGTTTATATCGAAGCG
		AntpPRE2_as	CGGCCAACTTGTGTTGTTGTTC
	bxd	bxd_AS	CGTTTTAAGTGCGACTGAG
		bxd_S	AAGGCGAAAGAGAGCAC
Reinforced targets	Dan	dan-phSite2-S	CATTGTACATTTGGCTGTCACC
		dan-phSite2-AS	GTCAGTTGGTCTGCCTTGGTAT
	DanR	danr-phSite-S	TTTCGTGAGCAGGACATGAGTA
		danr-phSite-AS	ACTCGCAGAAGGATGTGATTGT
Neo PRC1	Notch	N1 sense	ATGGGGAAACTACTCATGCAAG
		N1 antisense	TGTTTCAAATCGGCAGTGTGAC
	mys	Mys-phSite-S	ACTCCGATAACCAGAGTTCCTT
		Mys-phSite-AS	GAGCCTAGGAACAGTGTTGCAC
	Socs36E	Socs36E-Phsite-S	GTAGCACTAGCGGGTGGATAAC
		Socs36E-Phsite-AS	AGCCCGTGCTAGAGTATACGAA
	Sec61beta	Sec61beta-Phsite-S	AGTTGAGTTGCCTTAGCCTGTC
		Sec61beta-Phsite-AS	CATTTTGGGCTATCTGTTCCTC
	Lk6	lk6-Phsite-S	CGGAGGTACCATTTTGGTAGGA
		lk6-Phsite-AS	TGAGTTGCGTAGCCATACTACA
	tram	Tram-Phsite-S2	TGCAAGCTGAGTGTGACAAGAA
		Tram-Phsite-AS2	CTGAATCTCAATCGGCACAATC
	Stat92E	Stat92EPCPH2_S	CGACCAAAGGAAATCCTATCAG
		Stat92EPCPH2_AS	TTGTTCACATGTGTTCATCGTC

For H3K27me3, H3K27Ac and H2AK118Ub histone marks:

Category	Gene	Name	Sequence
Negative controls	PGRP-LE	pgrpK27ac2_S	ACATGTCCGTAGTTTTGGCTTC
		pgrpK27ac2_AS	CTGCGCATATAATGGTGGATAG
Canonical targets	Antp	AntpK27ac2_S	TCTCTGACGGTGTTTTTGTTTG
		AntpK27ac2_AS	AAATTAGAACCGCAATCAGTCG
	bxd	BxdK27ac2_S	CAATGGAGAGGCCGTTATAGAG
		BxdK27ac1_AS	TGTATCCTATGCAACGAAATGG
Reinforced targets	Dan	dan_s	CTCTCTAGCTTGACGCACCTTT
		dan_as	AAACTGTTTAGACCCGACATGG
	DanR	danr_s	GAGAAGCTTAGCCTTGTGGAAT
		danr_as	GTGCAGCATGTTGTTGGAGTAG
Neo PRC1	Notch	NK27ac2_S	TGAATGTGTGTGCAACAACG
		NK27ac1_AS	GTGTCGCTCTCTCGTTGCTATC
	mys	mysK27ac1_S	GTGTTTAGTGTGCGAGTGTGTG
		mysK27ac1_AS	CCGGAATCCATTGATTTCTTAC
	Socs36E	Socs36EK27ac1_S	TAGTTGGCAATTTGGCTAAACC
		Socs36EK27ac1_AS	CTGTCGAATGGAAATAGTGCAG
	Sec61beta	Sec61bK27ac2_S	CAGATTCACGTTCAGATTCCAC
		Sec61bK27ac1_AS	GACGTTGAACTGGCTGGAG
	Lk6	Lk6K27ac1_S	TAGAGTGAGACAGGCAGAGTGC
		Lk6K27ac1_AS	AACAGCGGAGAGCGATAGATAG
	tram	tramK27ac1_S	CAACGTCTACGTCAGCAAAATC
		tramK27ac1_AS	AAACACACATTTTGCCTTGTTG
	Stat92E	Stat92EK27Ac2_S	CTTTGGTACACAAACACCAACG
		Stat92EK27Ac2_AS	TCTAAATTCTCAGTGCGTGTGC

Supplementary Table 8: Number of reads for ChIP-Seq experiments.

	number of reads aligned	number of reads multiple matches
Eye_PC_Rep1	54797809	11247372
Eye_PC_Rep2	122608760	30313549
Eye_PH_Rep1	52030123	11968341
Eye_PH_Rep2	112559192	26728085
Eye_K27me3_Rep1	55698931	6432969
Eye_K27me3_Rep2	70164119	13553455
Eye_K27ac_Rep1	79056619	9529538
Eye_K27ac_Rep2	87019908	9995255
Eye_Input_Rep1	52136525	12637513
Eye_Input_Rep2	63192819	17319910
Wing_PC_Rep1	62179507	11260312
Wing_PC_Rep2	70560632	13214710
Wing_PH_Rep1	68772886	12334059
Wing_PH_Rep2	62010901	14109375
Wing_K27me3_Rep1	72923868	10680053
Wing_K27me3_Rep2	69250793	10868999
Wing_Input_Rep1	72872798	16428461
Wing_Input_Rep2	67969709	19205709

Supplementary Table 9: Correlations between ChIP-Seq replicates.

	Spearman
Eye PC	0,7
Eye PH	0,9
Eye K27me3	1
Eye K27ac	1
Wing PC	0,9
Wing PH	0,9
Wing K27me3	0,9

Supplementary Table 10: List of primers used to generate FISH probes.

Gene	Fragment	Sequence
ey	1	ATTATTCCCTACTAACTAAACCCATC
		TAAAGTTCCCTAAACCCATGC
	2	GGACGTGGCCTAGTAGAC
		TACTGCTGATCTTCAATGTGAC
	3	CGATAAGAAGAACGACGCT
		CACACGGTTTATAACGTCC
	4	CTATTGGCAACTCGTTCTCTC
		AACTGCACTCGCCTAGTA
	5	TCGAGTTCTTAGGAACTATAAGAGC
		TGTGGCGAAGTATGAAGATG
	6	ATTGAGTCTAACCGATCCATAAG
		TAACGTGAGATCGGCCT
eya	1	TATCTCTCGGATGCGGG
		GGATCTGCTGCTTCAAGG
	2	GTGACAGATTTCTTCCTGTTGATA
		TCTCTGCCTTAAACTCGGTAG
	3	CCTCGCCAATCAATGGAC
		CGCTGGATTCCGATCCTA
	4	CCAGGAGTCAGGTTTGAATAG
		AAATTGGGTTAGCCGAGG
hh	1	CGCTTTGGGTGTCGTAT
		AGTGTTTGAACTGCACGTAA
	2	GATGAGGTGTGGATCTGTAG
		GCCGGGAATCAAAGGATA
	3	TTACCACTTCGAAAGATGGTATAG
		TGAATGCCACGGGATTAG
	4	TAGTCAATCGCCCGAAGGA
		GACGGCTGAACGGTAGA
	5	GTGTGTTTGACCTCCATACC
		CCGAAGACTCAGGCACTA
robo3	1	GCATATTTATGATGATTGCCGAC
		ACAGAGGTACGATTAATTTACCC
	2	CCCAAGAAAGTAGGCTACG
		CGCTCCGAGATGTTGTTA
	3	GTAACGTTCTCTGTAACAGTATTCTA
		GCTTTGACATTGATAAATTATGCAGACTA
	4	GCTCTTAGCAGCAAATCCA
		TTGTTAAATGAAGACACACGG
	5	CCCACGCCAACAGTTTA
		CTGTATTTCAAACCACTCTCGTA

vg	1	AAAGGCCACATTTGTTCTCATA
		CGCGATCACTCACTAGG
	2	GCACTGTAACGAGAATTGAG
		TTTCTGCAGCAGTTGTAGTAT
	3	AAACAACTGCATTCGGC
		CCAACATTGAGTTGCGGA
	4	TCTTGTGTCGCAAGTTCC
		AATTATGATCGTGTCTAAGGGT
	5	CCAAACTCAAATGATGATGACC
		CCGAATCGAATCACCATACT