Supplementary Information

Characterization of an antagonistic switch between Histone H3 lysine 27 methylation and acetylation in the transcriptional regulation of Polycomb group target genes

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Contains

Supplementary Table 1. siRNAs used in the study.

Supplementary Table 2. Oligonucleotide primers used in the study

Table 1. siRNAs used in this study

Gene Symbols	Specie	Gene ID	siRNA ID	RefSeq ID	Approx. siRNA Start	siRNA Type
UNC	universal		UNC			negative control
Gapdh	Rat	24383	SASI_Rn01_00037849	NM_017008	2006	MISSION® siRNA Positive Control
Hat1	Mouse	107435	SASI_Mm01_00182490	NM_026115	1357	MISSION® siRNA
Hat1	Mouse	107435	SASI_Mm01_00182491	NM_026115	297	MISSION® siRNA
Hat1	Mouse	107435	SASI_Mm01_00182492	NM_026115	648	MISSION® siRNA
Kat2a	Mouse	14534	SASI_Mm01_00159517	NM_001038010	2216	MISSION® siRNA
Kat2a	Mouse	14534	SASI_Mm01_00159518	NM_001038010	1618	MISSION® siRNA
Kat2a	Mouse	14534	SASI_Mm01_00159519	NM_001038010	582	MISSION® siRNA
Kat2b	Mouse	18519	SASI_Mm01_00043888	NM_020005	519	MISSION® siRNA
Kat2b	Mouse	18519	SASI_Mm01_00043889	NM_020005	606	MISSION® siRNA
Kat2b	Mouse	18519	SASI_Mm01_00043890	NM_020005	1295	MISSION® siRNA
Crebbp	Mouse	12914	SASI_Mm01_00162905	NM_001025432	3839	MISSION® siRNA
Crebbp	Mouse	12914	SASI_Mm01_00162906	NM_001025432	749	MISSION® siRNA
Crebbp	Mouse	12914	SASI_Mm01_00162907	NM_001025432	5362	MISSION® siRNA
Ep300	Mouse	328572	SASI_Mm01_00159721	NM_177821	6634	MISSION® siRNA
Ep300	Mouse	328572	SASI_Mm01_00159722	NM_177821	4327	MISSION® siRNA
Ep300	Mouse	328572	SASI_Mm01_00159723	NM_177821	2105	MISSION® siRNA
Taf1	Mouse	270627	SASI_Mm01_00225608	XM_001000569	4496	MISSION® siRNA
Taf1	Mouse	270627	SASI_Mm01_00225609	XM_001000569	3334	MISSION® siRNA
Taf1	Mouse	270627	SASI_Mm01_00225610	XM_001000569	5556	MISSION® siRNA
Kat5	Mouse	81601	SASI_Mm01_00200730	NM_178637	1165	MISSION® siRNA
Kat5	Mouse	81601	SASI_Mm01_00200731	NM_178637	1024	MISSION® siRNA
Kat5	Mouse	81601	SASI_Mm01_00200732	NM_178637	1311	MISSION® siRNA
Myst3	Mouse	244349	SASI_Mm01_00258875	XM_146248	6372	MISSION® siRNA
Myst3	Mouse	244349	SASI_Mm01_00258876	XM_146248	2839	MISSION® siRNA
Myst3	Mouse	244349	SASI_Mm01_00258877	XM_146248	5069	MISSION® siRNA
Myst4	Mouse	54169	Myst4 575			
Myst4	Mouse	54169	Myst4 1887			
Myst4	Mouse	54169	Myst4 4805			
Myst2	Mouse	217127	SASI_Mm01_00188009	NM_177619	1627	MISSION® siRNA
Myst2	Mouse	217127	SASI_Mm01_00188010	NM_177619	791	MISSION® siRNA
Myst2	Mouse	217127	SASI_Mm01_00188011	NM_177619	989	MISSION® siRNA
Myst1	Mouse	67773	SASI_Mm01_00090499	NM_026370	1025	MISSION® siRNA
Myst1	Mouse	67773	SASI_Mm01_00090500	NM_026370	1265	MISSION® siRNA
Myst1	Mouse	67773	SASI_Mm01_00090501	NM_026370	419	MISSION® siRNA
Elp3	Mouse	74195	SASI_Mm01_00129238	NM_028811	895	MISSION® siRNA
Elp3	Mouse	74195	SASI_Mm01_00129239	NM_028811	707	MISSION® siRNA

Table 1. siRNAs used in this study

Elp3	Mouse	74195	SASI_Mm01_00129240	NM_028811	1607	MISSION® siRNA
Gtf3c4	Mouse	269252	SASI_Mm01_00114950	NM_172977	2290	MISSION® siRNA
Gtf3c4	Mouse	269252	SASI_Mm01_00114951	NM_172977	2196	MISSION® siRNA
Gtf3c4	Mouse	269252	SASI_Mm01_00114952	NM_172977	2536	MISSION® siRNA
Ncoa1	Mouse	17977	SASI_Mm01_00091811	NM_010881	1386	MISSION® siRNA
Ncoa1	Mouse	17977	SASI_Mm01_00091812	NM_010881	1598	MISSION® siRNA
Ncoa1	Mouse	17977	SASI_Mm01_00091813	NM_010881	2068	MISSION® siRNA
Ncoa3	Mouse	17979	SASI_Mm01_00107066	NM_008679	948	MISSION® siRNA
Ncoa3	Mouse	17979	SASI_Mm01_00107067	NM_008679	922	MISSION® siRNA
Ncoa3	Mouse	17979	SASI_Mm01_00107068	NM_008679	582	MISSION® siRNA
Ncoa2	Mouse	17978	SASI_Mm01_00172092	NM_008678	630	MISSION® siRNA
Ncoa2	Mouse	17978	SASI_Mm01_00172093	NM_008678	4107	MISSION® siRNA
Ncoa2	Mouse	17978	SASI_Mm01_00172094	NM_008678	1446	MISSION® siRNA
Clock	Mouse	12753	SASI_Mm01_00082135	NM_007715	1183	MISSION® siRNA
Clock	Mouse	12753	SASI_Mm01_00082136	NM_007715	1062	MISSION® siRNA
Clock	Mouse	12753	SASI_Mm01_00082137	NM_007715	1227	MISSION® siRNA

Additional sequences used in Figure 4C and D

p300	GGUAUGAUGAACAGUCCAG
Cbp	CCAAGGAGACUCAUCAACA

Table 2. Oligonucleotide primers used in this study.

Expression primer pairs

Target gene	Forward sequence 5' to 3'	Reverse sequence 5' to 3'
Clock-1	TGCCATTTGAAGTCTTGGGAAC	ACGATTTGCCTTTTCCATATTGC
Crebbp-1	TCTCTCCCACACTGTCGAACC	AGAGATGATTTGTCGTGAAGATGC
Elp3-1	TCCACACATCAGTTTCACAGGG	CTCATGGAAGTTGGCTCATAGCC
Ep300-1	TGAGGCAGTGCAACCTTCC	TTGTCGAGAAGATGCACAATGTG
Fgf4	CTACTGCAACGTGGGCATCG	CGCTGCACCGGAGAGAGC
Gtf3c4-2	GTCCTGCCAGAGCTTGATATACAG	AGGACAAGGACTCTGCAGCAAC
Hat1-1	GCTCTTTGCGACCGTAGGCTAC	CCCTGACCTTGAAATGGAGTCAG
Hoxa5	TACCCCTGGATGCGCAAG	CAGCTCCAGGGTCTGGTAGC
Hoxa9	GCATCGCTTCTTCCGAGTG	CCTTCAGAAAACAGTAAAGCTTCGC
Kat2a-2	CATGGAGCTGGTCAATGAGGTC	AGGCGAGCCGTCTCATCTC
Kat2b-1	CCCAATGATGACATCTCTGGATAC	AAACACCTTTGTGGTTTCGTACC
Kat5-1	CTACCTGTGCGAATTTTGCCTC	CCCTTGCGGTAAATTTCATTG
Lipocalin	CACAGGTATCCTCAGGTACAG	CTCCTTGGTTCTTCCATACAG
Myst1-1	GACCTATGCAGAGATGGACCCC	GCATCGATTTCATAGTTCCCAATG
Myst2-1	CTTTTCCGAAGAGCACAAGCC	ATAGCGGCCAAAAGCAATTG
Myst3-1	ACCACTTACACGGATGCCAAAAG	GCATAGCGCCGTTTTATCTGTG
Myst4-1	TTTAAGCAGGCCCAGGAACTG	GGTTTGGATCTCGTATTTCCCG
Ncoa1-1	TTCACAACAAAGAAAAATCCATCC	TGCCAGCGCTATGAAGTAATGC
Ncoa2-1	TCAAGAACCTGCTGCCAAAGTC	CTGGCAAAGGCTTCACCAG
Ncoa3-1	GCAATCCTGTAACGAATGATCG	GAGGTCGGATGCCTTGTCC
ß-Globin	ATCCTGAGAACTTCAGGCTC	TAGTGGTACTTGTGAGCCAG
Taf1-2	AAGGAACTCCAGCGGATGC	GTGGCAGAAGAGTTAAGGCTGGTC

ChIP primer pairs

Target gene	Forward sequence 5' to 3'	Reverse sequence 5' to 3'
Olig1	CCATCTGTTGCAAAATCGTG	CTCGAGCTCTATTGCCATCC
Olig2	GCCTGACGCTACAGTGACAA	GGCTAATTCCGCTCAATGAA
LUC TSS	CGCCAAAAACATAAAGAAAGGC	CCAGCGGTTCCATCCTCTAGAG
Hoxa5	ACAACTTTATTTCCCCGGCTTTG	AACCGACCCCAACCTCTACAC
Hoxa9	ATCTGTATGCCTAGTCCCGCTCC	TTGATGTTGACTGGCGATTTTC
Fgf4	CGGCTCCCTTAGAGTTACACCC	ACTTGGTGAACCGCCAGAAC