Table S1. Primer sequences used for qRT-PCR.

ACTB	CACCATTGGCAATGAGCGGTTC AGGTCTTTGCGGATGTCCACGT
LCOR	AAGTCCATGTGCTGGCAGCACT ATCACCACTCCGAAGTCCGTCT
KLF6	CGGCTGCAGGAAAGTTTACA AAAAACACCTGTCACAGTGGGAGC
CTBP1	AGATGCCCATCCTGAAGGACGT GAGGGCTTTGAACTTCTCCAGG
CDKN1A	AGGTGGACCTGGAGACTCTCAG TCCTCTTGGAGAAGATCAGCCG
CDH1	GCCTCCTGAAAAGAGAGTGGAAG TGGCAGTGTCTCTCCAAATCCG
ATF3	CGCTGGAATCAGTCACTGTCAG CTTGTTTCGGCACTTTGCAGCTG
PLAU	GGCTTAACTCCAACACGCAAGG CCTCCTTGGAACGGATCTTCAG
MMP9	GCCACTACTGTGCCTTTGAGTC CCCTCAGAGAATCGCCAGTACT
TFPI2	TACTGGCTGTGGAGGGAATGAC CGGATTCTACTGGCAAAGCGAAG

Fig.S1

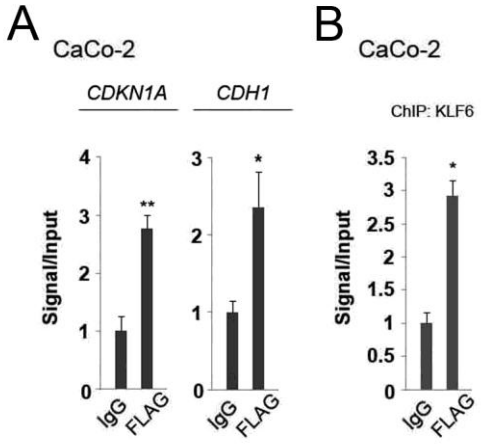

FIGURE S1. Analysis of FLAG-LCoR binding to the *CDKN1A* and *CDH1* promoters by ChIP assay. A. ChIP assays were performed with anti-FLAG (F1804) antibody following transfection with FLAG-LCoR in CaCo-2 cells. qPCR was performed with specific primers for the *CDKN1A* or *CDH1* promoters. B. Results of re-ChIP assays are shown, in which a first round of ChIP for KLF6 (SC-7158) followed by a second round of immunoprecipitation for FLAG (F1804) were performed in CaCo-2 cells, followed by qPCR with specific primers for the *CDKN1A* promoter.

Fig.S2

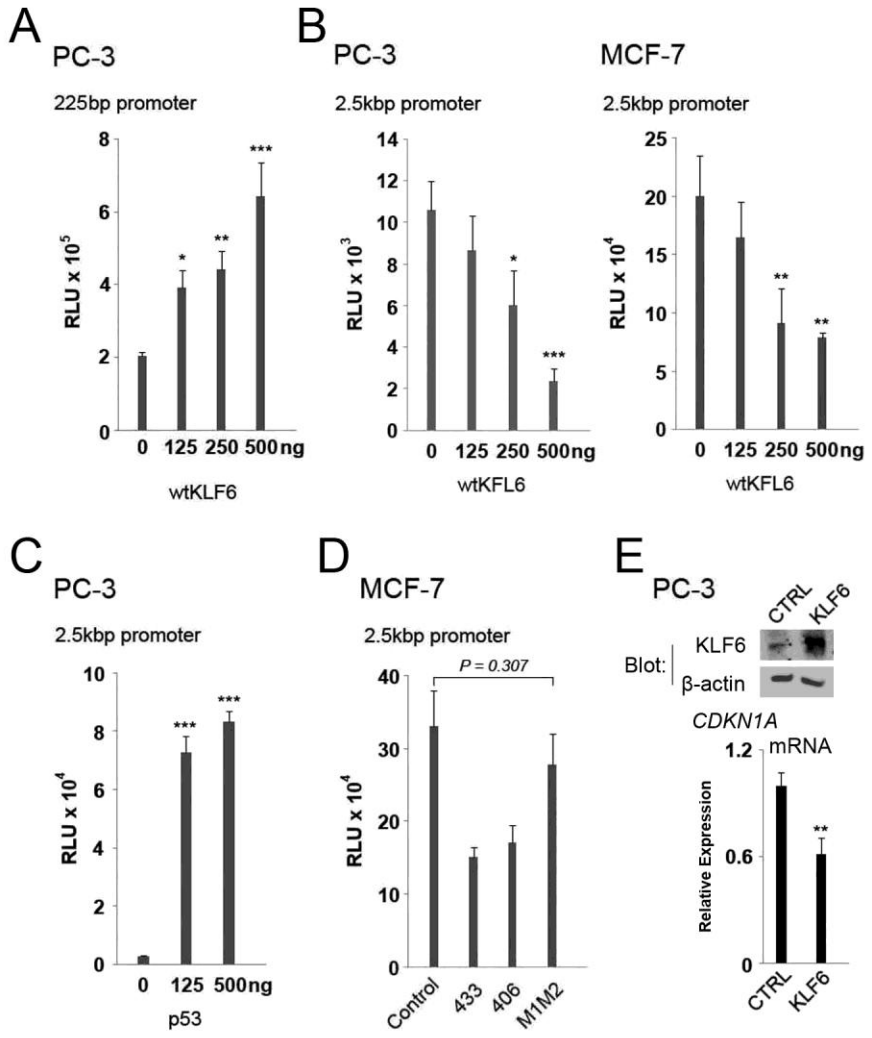

FIGURE S2. KLF6 and LCoR regulation of the expression of reporter gene driven by the *CDKN1A* promoter. A. Luciferase reporter gene assays with a short fragment (225bp) of the *CDKN1A* promoter were performed in PC-3 cells with wild type KLF6 (wtKLF6). B. Luciferase reporter gene assays with a long fragment (2.5kbp) of the *CDKN1A* promoter were performed in PC-3 (Left) and MCF-7 cells (Right) with wtKLF6. C. A control luciferase reporter gene assay with the long fragment (2.5kbp) of the *CDKN1A* promoter was performed with wild type p53 in PC-3 cells. D. A luciferase reporter gene assay with the long fragment of the *CDKN1A* promoter was performed with 500ng of the different LCoR variants in MCF-7 cells. One way ANOVAs were performed followed by the Tukey test for multiple comparisons to establish statistical significance on all assays. E. Inset: Western Blot with anti-KLF6 antibody (SC-7158) of transfected PC-3 cells with control or KLF6 expression vectors. RT-qPCR with *CDKN1A* primers of PC-3 extracts following transfection with a control or KLF6 expression vector.

Fig.S3

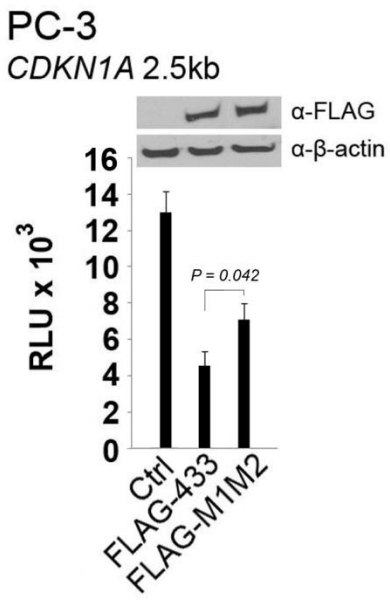

FIGURE S3. Wild type and mutant LCoR regulate expression of a reporter gene construct driven by the *CDKN1A* promoter. Inset: A western blot for α-FLAG or α-β-actin was carried out in PC-3 cells transfected with FLAG-LCoR-433 (wild type) or FLAG-LCoR-M1M2 (mutant). A luciferase assay was performed with the *CDKN1A* promoter in PC-3 cells with the indicated FLAG-tagged vectors. One way ANOVA was performed followed by the Tukey test for multiple comparisons to establish statistical significance.

Fig.S4

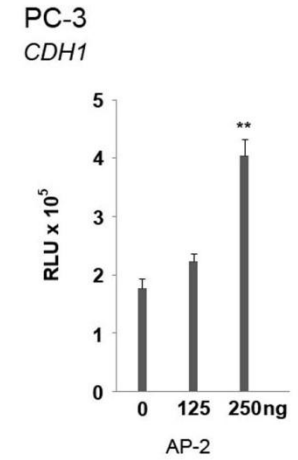

FIGURE S4. The transcription factor AP-2 transactivates the *CDH1* promoter. A control luciferase reporter gene assay was performed in PC-3 with the *CDH1* promoter and an expression vector for AP-2. One way ANOVA was performed followed by the Tukey test for multiple comparisons to establish statistical significance.

Fig.S5

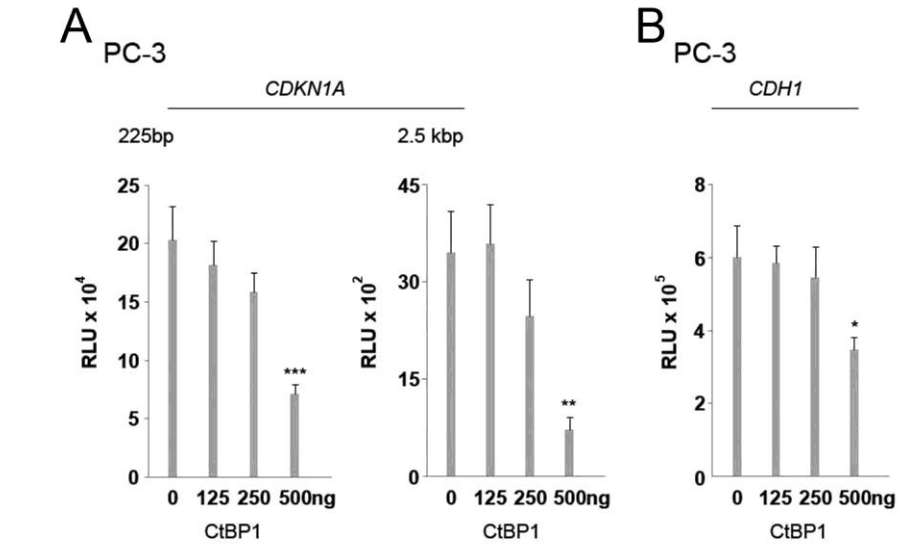

FIGURE S5. CtBP1 acts as a repressor of a reporter gene driven by the *CDKN1A* or *CDH1* promoter. A, Luciferase reporter gene assays with the short (225bp) and the long (2.5kbp) fragment of the *CDKN1A* promoter were performed in PC-3 cells with an expression vector for CtBP1. One way ANOVAs were performed followed by the Tukey test for multiple comparisons to establish statistical significance in all assays. B, A luciferase reporter gene assay with a fragment of the *CDH1* promoter was performed in PC-3 cells with an expression vector for CtBP1.

Fig.S6

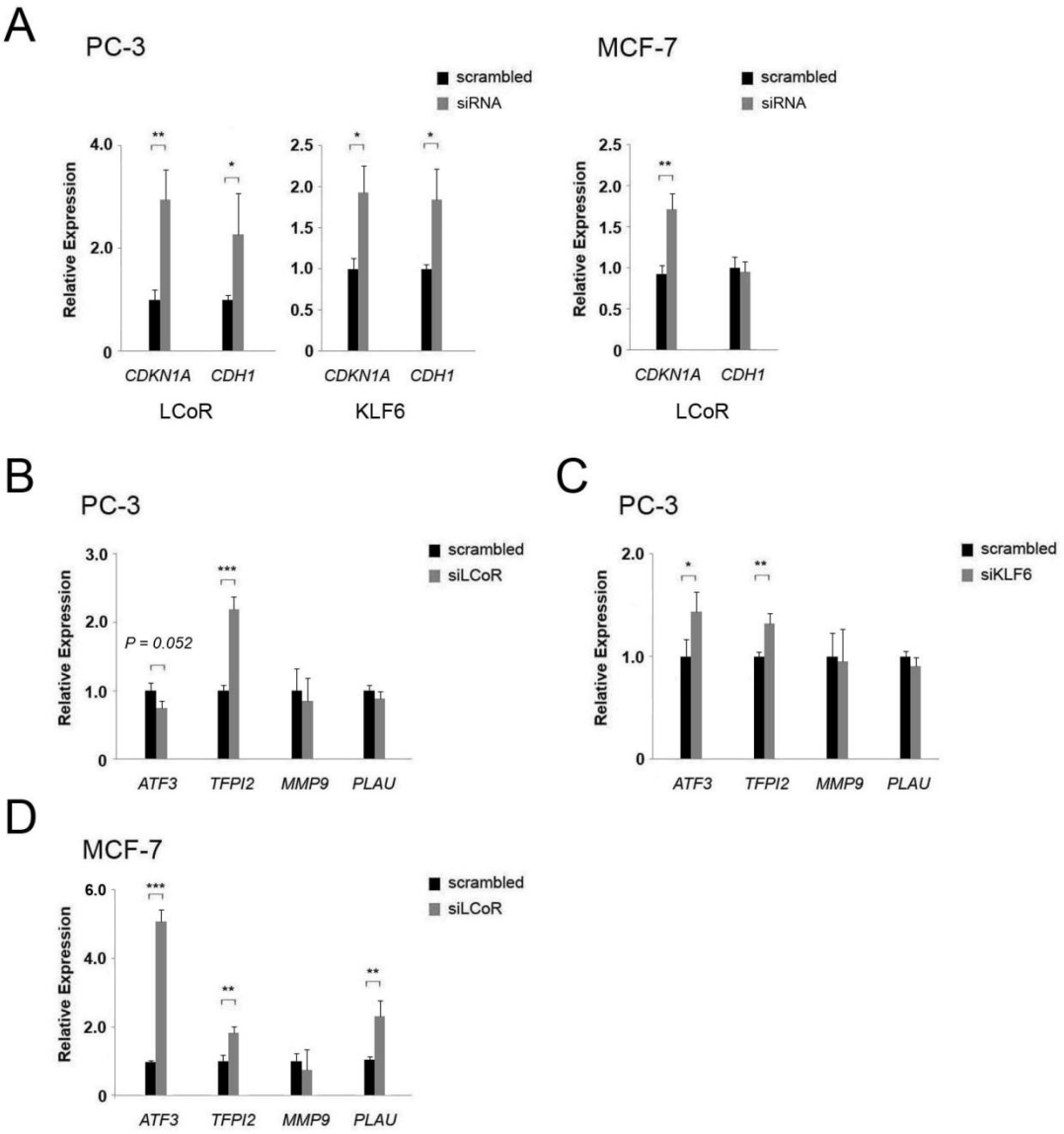

FIGURE S6. Additional Gene knockdowns confirm regulation of *CDKN1A* and *CDH1* and additional target genes by KLF6 and LCoR. A. mRNA levels of the *CDKN1A* or *CDH1* genes were measured by RT-qPCR after siRNA-mediated knockdown of LCoR, and KLF6 in PC-3 cells and LCoR in MCF-7 cells. B and D. mRNA levels of the indicated KLF6 target genes were measured by RT-qPCR after siRNA-mediated LCoR knockdown in PC-3 (B) and MCF-7 (D) cells. C. mRNA levels of the indicated KLF6 target genes were measured by RT-qPCR after siRNA-mediated KLF6 knockdown in PC-3 cells. Two-sample t-tests were performed to determine statistical significance in all cases.

Fig.S7

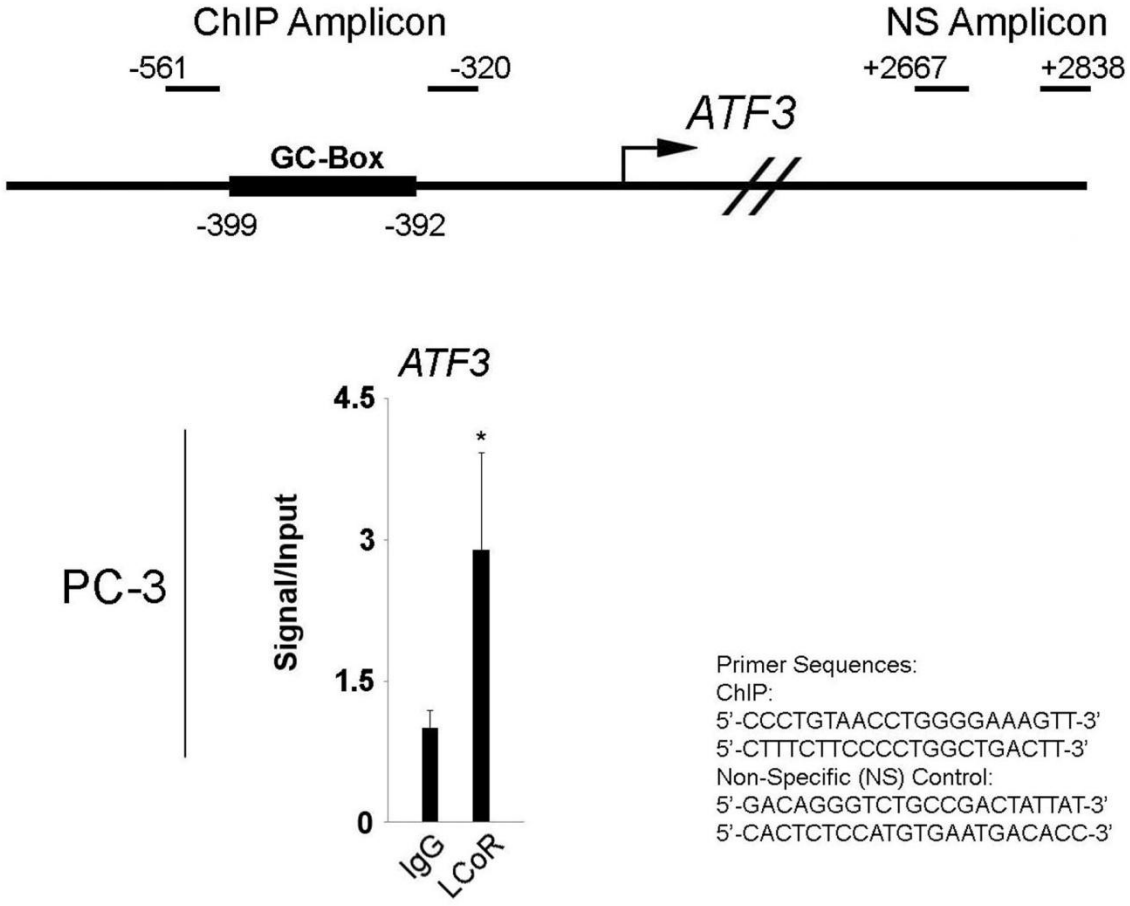

FIGURE S7. LCoR binds the same region on the *ATF3* promoter as KLF6. A ChIP assay was performed with anti-LCoR (sc-134674) antibody in PC-3 cells followed by qPCR with the indicated ChIP primers and non-specific (NS) control primers.