

Supplementary Table 1. List of antibodies used. WB, western-blot; IHC, immunohistochemistry; ChIP, chromatin immunoprecipitation.

Protein	Reference	Supplier	Technique	Dilution (WB)	Total amount (ChIP)	Dilution (IHC)
KDM6B/JMJD3	ab154126	Abcam	WB	1:1000		
	ab38113	Abcam	WB & IHC	1:1000		1:50
KDM6A/UTX	D3Q1I	Cell signaling	WB & IHC	1:1000		1:100
H3K27me3	07-449	Cell signaling	WB & ChIP-seq & IHC	1:1000	2 micrograms	1:100
H3K27ac	D5E4	Cell signaling	WB & ChIP-seq & IHC	1:1000	2 micrograms	1:100
EZH2	5246S	Cell signaling	WB & ChIP-seq	1:1000	2 micrograms	
SMARCA4	49360S	Cell signaling	WB & ChIP-seq	1:1000	2 micrograms	
ACTIN	13859	Sigma	WB	1:10000		
TUBULIN	T6199	Sigma	WB	1:10000		
PARP	C2-10	BD Pharmingen	WB	1:5000		
CASPASE-3	3G2	Cell signaling	IHC			1:100

Supplementary Table 2. List of primers used for the quantitative RT-PCRs.

Gene	Forward (5'-3')	Reverse (5'-3')	Scale (μmoles)	Supplier
<i>ACTB</i>	GGCATCCTCACC CTGAGGTA	AGGTGTGGTCGGAG ATTTTC	0.025	Sigma
<i>GUSB</i>	CTGTACACGACA CCCACCAC	GATGAGGAACTGGC TCTTGA	0.025	Sigma
<i>KDM1A/LSD1</i>	GCCATGGTGGTA CAGGTCTA	TGGCCAGTTCCATA TTTACA	0.025	Sigma
<i>KDM2A</i>	CGGATAGTTGAG AAAGCCAT	CTCTTTGGTGGGCC TCTGTA	0.025	Sigma
<i>KDM3A</i>	ACCTGCAGTTATT CTTCAGC	TAATGCCAGTCCTAT GCCAT	0.025	Sigma
<i>KDM4A/JMJD2A</i>	CCTCACTGCGCT GTCTGTAT	CCAGTCGAAGTGAA GCACAT	0.025	Sigma
<i>KDM4B/JMJD2B</i>	GATCTCCATGGA CGTGTTCCG	CGTTTCCGGTGAGA CCTGCC	0.025	Sigma
<i>KDM4C/JMJD2C</i>	GGCATAGGTGAC AGGGTGTG	CGGGGACCAAACCTC TGGAAG	0.025	Sigma

<i>KDM4D/JMJD2D</i>	CGGGATCTGCAC AGATTATC	AGTTTCTGAGGAGG GCGACC	0.025	Sigma
<i>KDM5A</i>	GGTTTCTTAAGGT GGCAAGT	TTCTTTTGTACTGTT CCCTA	0.025	Sigma
<i>KDM5B</i>	AGCTTTTCTCAGA ATGTTGG	GCAGAGTCTGGGAA TTCACA	0.025	Sigma
<i>KDM5C</i>	GGGTTTCTAAAGT GTAGATC	CCCACACATCTGAG CTTTAG	0.025	Sigma
<i>KDM6A/UTX</i>	GTCCGAGTGTCA ACCAACTG	TGAGAGTCCTGGAG TAGGAG	0.025	Sigma
<i>KDM6B/JMJD3</i>	CTCAACTTGGGC CTCTTCTC	GCCTGTCAGATCCC AGTTCT	0.025	Sigma

Supplementary Table 3. References for the shRNAs

Name	Clone ID	Vector	Target gene	Supplier
#60	TRCN0000107760	pLKO.1	<i>KDM6A</i>	Sigma
#61	TRCN0000107761	pLKO.1	<i>KDM6A</i>	Sigma
#63	TRCN0000107763	pLKO.1	<i>KDM6A</i>	Sigma
#64	TRCN0000107764	pLKO.1	<i>KDM6A</i>	Sigma
#77	TRCN0000236677	pLKO.1	<i>KDM6B</i>	Sigma
#78	TRCN0000236678	pLKO.1	<i>KDM6B</i>	Sigma
#676	TRCN0000236676	pLKO.1	<i>KDM6B</i>	Sigma
#976	TRCN0000359976	pLKO.1	<i>KDM6B</i>	Sigma