SUPPLEMENTARY TABLES

Table S1 – Materials and Methods

Plasmids

pLenti6-miRNA-Ctrl
pLenti6-miRNA-KMT9α

miRNA sequences (5'-3')

Human miKMT9α

Top strand
TGCTGATGTGAACTTTGTTACAGCGTGTTTTGGCCACTGACTGACACGCTGTAA
AAGTTCACAT
Bottom strand
CCTGATGTGAACTTTTACAGCGTGTCAGTCAGTGGCCAAAACACGCTGTAACAA
AGTTCACATC

Human miCtrl

Top strand
TGCTGAAATGTACTGCGCGTGGAGACGTTTTGGCCACTGACTGACGTCTCCAC
GCAGTACATTT
Bottom strand
CCTGAAATGTACTGCGTGGAGACGTCAGTCAGTGGCCAAAACGTCTCCACGCG
CAGTACATTTC

Control miRNA (miCtrl) or miRNA directed against *KMT9α* (miKMT9α) were designed using BLOCK-IT™ RNAi Designer. Each oligonucleotides pair encodes for a pre-miRNA and contains a linker sequence (purple), the mature miRNA sequence (green), a loop sequence (black) and a sequence containing the nucleotides 1-8 and 11-21 of the 21-mer target sequence (red).

Primer sequences qRT-PCR (5'-3')

Aurkb	CAGACTTTGGCTGGTCGGT and TATGCATGCGCCCCTCAATC
E2f1	CAGCTGCAACTGCTTTCGG and AGGAGGGGCCTTGATCACTA
Esco2	CACCACCGATTTCTGGAAGGA and TGGCAGGACCAACACAATCT
Hprt	GTTAAGCAGTACAGCCCCAAA and AGGGCATATCCAACAACAAACTT
HPRT	CCTGGCGTCGTGATTAGTGAT and AGACGTTCAGTCCTGTCCATAA
Kmt9α	CAGCCGCATGTACCTTGGAA and TCCACGACTTCCTACCTCTTCA
KMT9α	ACGTTTCTGCTTTTGGACGC and TCAGTGCACATGTACAAAGCC
Mcm6	ACCTTCTCTTTGCCCGACAG and CTGGCGGAGACGTTTGTACT
Pclaf	CTGGCGGAGACGTTTGTACT and TGGGTTCCCTCCTGCATACTT
Pmaip1	GAAGTCGCAAAAGAGCAGGA and GTTGAGCACACTCGTCCTTCA
Prr11	TTGTGCAAGCTCCGAGAAAAC and ATTCGTCGTTGGAGCACAGG
Rad51c	GGTTTCAGACGGCGGAGGA and CGGCACATCTTGGTTTATTTGT
Rpa2	ACCAGGATGTGGAATAGCGG and ACAATATGCTGGGCTCGGAC
Tgfb2	CAGCGCTACATCGATAGCAA and CCTCGAGCTCTTCGCTTTTA
Top2a	CCTCGGGGCAAAAGAGTCAT and CTATTCGTTGCCGGAG

Table S2 – List of the 12 significantly differentially expressed genes in KMT9α-deficient compared to KMT9α-proficient colon (p<1e-6)

Gene name	Fold change
Ceacam2	12.04
Dmtn	20.86
Gm15915	7.05
H2-Aa	0.22
H2-Ab1	0.26
Krt12	7.65
Lpo	36.74
N6amt1	0.51
Phyhip	19.84
Scpep1	1.62
Serinc3	1.49
Slpi	0.13

Table S3 – Gene list of pro-apoptotic genes used to calculate gene scores with Seurat depicted in figure 3l.

Gene symbol	Full gene name
Aifm3	apoptosis inducing factor mitochondria associated 3
Anxa1	annexin a1
App	amyloid beta precursor protein
Atf3	activating transcription factor 3
Bax	bcl2 associated x, apoptosis regulator
Bcap31	b cell receptor associated protein 31
Bcl10	bcl10 immune signaling adaptor
Bcl2l11	bcl2 like 11
Bid	bh3 interacting domain death agonist
Bik	bcl2 interacting killer
Bmf	bcl2 modifying factor
Bmp2	bone morphogenetic protein 2
Bnip3l	bcl2 interacting protein 3 like
Brca1	brca1 dna repair associated
Btg2	btg anti-proliferation factor 2
Btg3	btg anti-proliferation factor 3
Casp1	caspase 1
Casp2	caspase 2
Casp3	caspase 3
Casp4	caspase 4
Casp6	caspase 6
Casp7	caspase 7
Casp8	caspase 8
Casp9	caspase 9
Cdkn1a	cyclin dependent kinase inhibitor 1a
Cdkn1b	cyclin dependent kinase inhibitor 1b
Cyld	cyld lysine 63 deubiquitinase
Dap	death associated protein
Dap3	death associated protein 3
Ddit3	dna damage inducible transcript 3
Dffa	dna fragmentation factor subunit alpha
Diablo	diablo iap-binding mitochondrial protein
Dnaja1	dnaj heat shock protein family (hsp40) member a1
Dnajc3	dnaj heat shock protein family (hsp40) member c3
Dnm1l	dynamin 1 like
Egr3	early growth response 3
Fas	fas cell surface death receptor
Fdxr	ferredoxin reductase
Gadd45a	growth arrest and dna damage inducible alpha
Gadd45b	growth arrest and dna damage inducible beta
Hmgb2	high mobility group box 2
Ifngr1	interferon gamma receptor 1
Il18	interleukin 18
Irf1	interferon regulatory factor 1
Madd	map kinase activating death domain
Nedd9	neural precursor cell expressed, developmentally down-regulated 9
Nefh	neurofilament heavy
Pdcd4	programmed cell death 4
Pmaip1	phorbol-12-myristate-13-acetate-induced protein 1

Ppp2r5b	protein phosphatase 2 regulatory subunit b'beta
Psen1	presenilin 1
Psen2	presenilin 2
Rara	retinoic acid receptor alpha
Rela	rela proto-oncogene, nf-kb subunit
Rhob	ras homolog family member b
Rock1	rho associated coiled-coil containing protein kinase 1
Sat1	spermidine/spermine n1-acetyltransferase 1
Slc20a1	solute carrier family 20 member 1
Smad7	smad family member 7
Tap1	transporter 1, atp binding cassette subfamily b member
Tgfb2	transforming growth factor beta 2
Tgfbr3	transforming growth factor beta receptor 3
Tnf	tumour necrosis factor
Tnfrsf12a	tnf receptor superfamily member 12a
Tnfsf10	tnf superfamily member 10
Tspo	translocator protein
Txnip	thioredoxin interacting protein
Vdac2	voltage dependent anion channel 2