

## Supplementary Table 1. Sequences of the siRNAs and primers in this study

The sequences of the sense strands of the siRNA used are as follows,

NSC1	UUCGAACGUGUCACGUCAA[dT][dT]
EHMT1-437	GCACAGCCCUUGAGGACUA[dT][dT]
EHMT1-869	CAGCUGCAGUAUCUCGGAA[dT][dT]
EHMT2-2202	ACAUAAAUGCAGUGGACAA[dT][dT]
EHMT2-3985	CCAACUGGUUCCUUUUGUU[dT][dT]
LIG1-989	GGAAGAUGCCUGCUGGAAA[dC][dG]
LIG1-1659	GGCAUGAUCCUGAAGCAGA[dT][dT]
UHRF1-3597	AGAUUAACGUUAGGGUUU[dT][dT]
UHRF1-3670	UCACAUACCUGCAGACAAA[dT][dT]

The sequences of qRT-PCR primers are as follows,

<i>GAPDH</i> :	CGACCACTTTGTCAAGCTCA AGGGGTCTACATGGCAACTG
<i>CGAS</i> :	GCCGCCGTGGAGATATCAT GGCGGTTTTGGAGAAGTTGA
<i>STING1</i> :	ATATCTGCGGCTGATCCTGC TTGTAAGTTCTGAATCCGGGC
<i>IFNA</i> :	AATGACAGAATTCATGAAAGCGT GGAGGTTGTCAGAGCAGA
<i>IFNB</i> :	GCCATCAGTCACTTAAACAGC GAAACTGAAGATCTCCTAGCCT
<i>CXCL9</i> :	CCAGTAGTGAGAAAGGGTCGC AGGGCTTGGGGCAAATTGTT
<i>CXCL10</i> :	GCCTTCGATTCTGGATTTCAG GTGGCATTCAAGGAGTACCTC

The sequences of bisulfite sequencing PCR primers are as follows,

<i>STING1</i> me:	GATGGGGTTTTATTATGTTGTTTAG AAAAATAAAAAATAACAATTATTTCC
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## Supplementary Table 2. Antibodies for WB, IHC and IF used in this study

Antibody	WB	IHC	IF	Company	Identifier
H3K9me2	1:3000	-	-	Sigma	07-441
H3	1:5000	-	-	Santa Cruz	sc-517576
EHMT1	1:3000	-	-	Cell Signaling	35005S
EHMT2	1:3000	-	-	Proteintech	66689-1-Ig
GAPDH	1:500000	-	-	Proteintech	60004-1-Ig
UHRF1	1:3000	-	-	Proteintech	21402-1-AP
LIG1	1:5000	-	-	Proteintech	67840-1-Ig
γH2AX(Ser139)	1:4000	1:500	-	Sigma	05-636
LIG3	1:3000	-	-	Proteintech	26583-1-AP
MCM4	1:3000	-	-	Santa Cruz	sc-48407
MCM10	1:3000	-	-	Proteintech	12251-1-AP
CDC45	1:3000	-	-	Santa Cruz	sc-55569
PCNA	1:6000	-	-	Cell Signaling	13110S
p-KAP1(Ser824)	1:3000	-	-	Bethyl	ab48508
KAP1	1:6000	-	-	Proteintech	66630-1-Ig
p-CBK2 (Thr68)	1:3000	-	-	Cell Signaling	2197S
CHK2	1:3000	-	-	Cell Signaling	MA5-32450
RPA32	1:6000	-	-	Santa Cruz	sc-56770
STING	1:3000	1:200	-	Cell Signaling	13647
cGAS	1:3000	-	-	Cell Signaling	79978S
CldU	-	-	1:300	Abcam	ab6326
IdU	-	-	1:30	BD biosciences	347580
BrdU	-	-	1:100	BD biosciences	347580
RPA32	-	-	1:500	Cell Signaling	2208S
Ki-67	-	1:800	-	Cell Signaling	12202
Cleaved Caspase3	-	1:200	-	Cell Signaling	9661S

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CD4	-	1:1000	-	Abcam	ab183685
CD8	-	1:200	-	Cell Signaling	98941
PD-L1		1:200		Thermofisher	MA5-32450
ECL Rabbit IgG	1:6000	-	-	Cytival	NA934
ECL Mouse IgG	1:6000	-	-	Cytival	NA931
Goat anti-Mouse IgG, Alexa Fluor 488	-	-	1:600	Thermo fisher	A-11029
Goat anti-Rat IgG, Alexa Fluor 594	-	-	1:600	Thermo fisher	A-11007

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### Supplementary Table 3. Drugs information used in this study

<b>Drugs</b>	<b>Company</b>	<b>Identifier</b>
UNC0638	Selleckchem	S8071
UNC0642	Selleckchem	S7230
BrdU	Sigma	B5002
CldU	Sigma	C6891
IdU	Sigma	I7125
ATMi KU55933	Selleckchem	S1092
ATMi KU60019	Selleckchem	S1570
ATRi VE821	Selleckchem	S8007
Bleomycin	vwr	1076308
Camptothecin	Selleckchem	S1288
Cisplatin	Sigma	PHR1624
Cyclophosphamide	Selleckchem	S2057
Temozolomide	Sigma	PHR1437
Mirin	Selleckchem	S8096
anti-mouse PD-1 (CD279)	Bioxcell	BE0273
rat IgG2a isotype	Bioxcell	BE0089