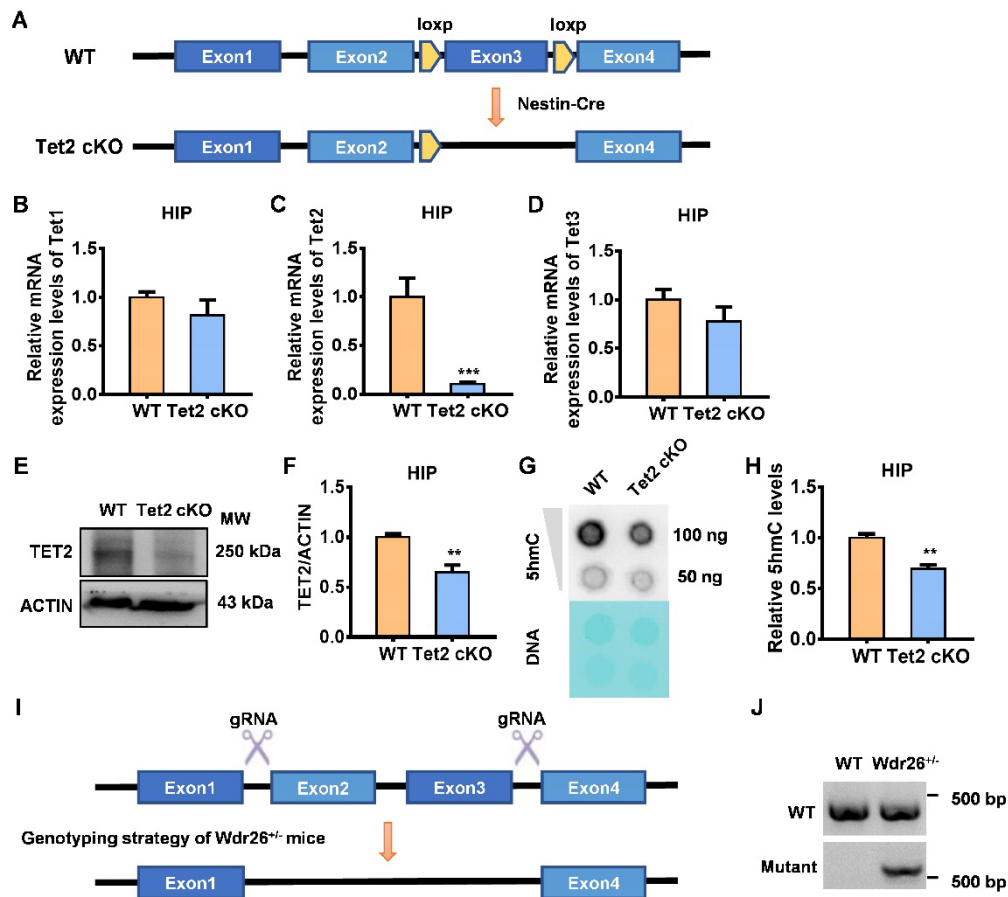


1 Supplemental Figures



2

3 **Fig. S1 Genotype of *Tet2* cKO mice and *Wdr26*<sup>+/-</sup> mice and function identification**

4 **of *Tet2* cKO mice.** (A)The loxp tags are located on either side of exon 3 of *Tet2* gene.

5 The Nestin-*Cre Tet2*<sup>loxp/loxp</sup> (*Tet2* cKO) mice were were obtained by crossing two

6 generations of Nestin-*Cre* and *Tet2*<sup>fllox/fllox</sup> mice. (B-D) Relative mRNA levels of

7 *Tet1/2/3* in the hippocampi from WT and *Tet2* cKO mice were examined. n=6. (E-F)

8 Representative Western blots (E) and quantitative analysis of TET2 (F) in the

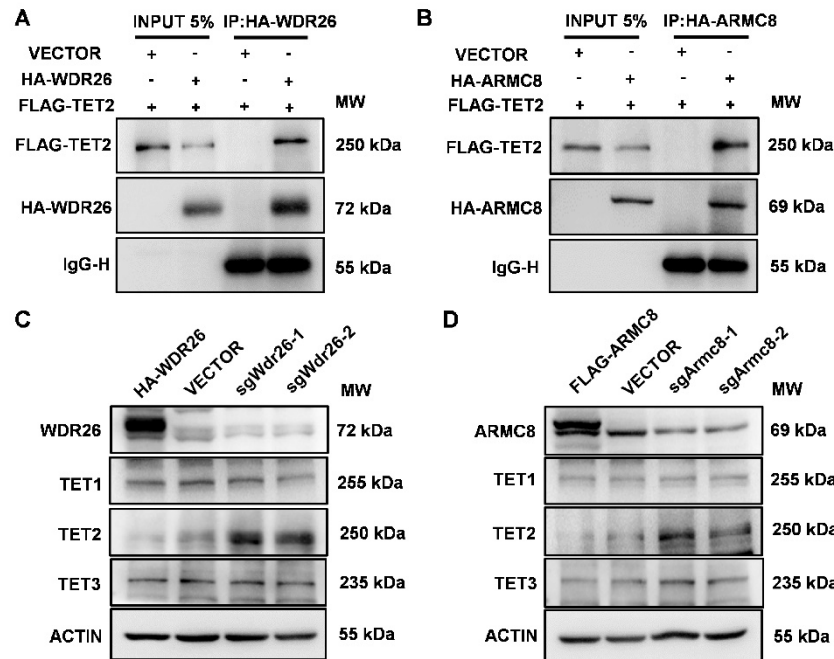
9 hippocampus from WT and *Tet2* cKO mice were shown. n=3. (G-H) Representative

10 5hmC dot-blots (G) and quantitative analysis (H) in the hippocampus from WT and

11 *Tet2* cKO mice were shown. n=3. (I) Cas9 mRNA and sgRNAs targeting exon 2 to

12 exon 3 of mouse *Wdr26* gene were used for knockout mouse production. (J) Genotype  
13 identification of wildtype (WT) and *Wdr26*<sup>+/-</sup> mice was performed by PCR. All data  
14 were presented as mean ± SEM. Unpaired two-tailed Student's *t*-test was used.  
15 \*\**P* < 0.01; \*\*\**P* < 0.001.

16



18

19 **Fig. S2 GID complex induced TET2 degradation via the interaction with WDR26**

20 **and ARM C8.** (A–B) Mouse FLAG-TET2 and HA-WDR26/HA-ARM C8 expression

21 plasmids were co-transfected into HEK293t cells, and using anti-HA magnetic beads

22 for extraneous immunoprecipitation. Co-IP assays was used to validate the interaction

23 of HA-WDR26 (A) or HA-ARM C8 (B) with FLAG-TET2 in HEK293t cells. (C–D)

24 WT N2a cells were transfected with VECTOR plasmids, HA-WDR26 plasmids,

25 FALG-ARM C8 plasmids, sgWdr26 or sgArmc8. *Armc8* KO N2a cells were transfected

26 with VECTOR or FLAG-ARM C8 plasmids. Representative Western blots of TET

27 family and WDR26/ARM C8 were shown.

28

**Antibodies**

<b>Name</b>	<b>Cat. No</b>	<b>Manufacturer</b>	<b>WB</b>	<b>IF</b>
Anti-TET1 antibody	GTX125888	GeneTex	1:1000	
Anti-TET2 antibody	ab124297	Abcam	1:1000	
Anti-TET3 antibody	ab139311	Abcam	1:1000	
Anti-TUJ1 antibody	ab18207	Abcam	1:1000	1:200
Anti-GFAP antibody	MAB360	Millipore	1:1000	1:1000
Anti-NESTIN antibody	MAB353	Millipore		1:200
Anti-SOX2 antibody	GTX101507	GeneTex		1:200
Anti-WDR26 antibody	HPA028539	Sigma	1:500	
Anti-ARMC8 antibody	sc-365307	Santa	1:500	
Anti-FLAG antibody	F3165	Sigma	1:4000	
Anti-HA antibody	GTX628489	GeneTex	1:5000	
Anti-ACTIN antibody	M1306-4	Hua An bio	1:5000	
Anti-5mC antibody	MABE146	Millipore	1:2000	
Anti-5hmC antibody	39769	Active Motif	1:10000	
Anti-TUBULIN antibody	Ab009-100	MultiSciences	1:10000	
Anti-MAP2 antibody	ab5392	Abcam		1:200
Anti-UBIQUITIN antibody	ab134953	Abcam	1:1000	

**Cell Lines**

<b>Name</b>	<b>Manufacturer</b>
N2a cells	ATCC
HT22 cells	ATCC
HEK-293T cells	ATCC

**Oligos****sgRNA**

sgWDR26-1	F	CACCGCAATAACGGGGTTCCTCCGGCG
	R	AAACCGCCGGGAACCCCGTTATTGC
sgWDR26-2	F	CACCGTCAATAACGGGGTTCCTCCGG
	R	AAACCGGGGAACCCCGTTATTGAC
sgARMC8-1	F	CACCGCCGCATGAGCGTCCTCTCGG
	R	AAACCGAGAGGACGCTCATGCGGC
sgARMC8-2	F	CACCGTGCTAGCTGTTACCTCCGAG
	R	AAACCTCGGAGGTAACAGCTAGCAC
sgTET2-1	F	CACCGCTGACGGCTGCTTTTACCG

	R	AAACCGGTAAAAGCAGCCGTCAGC
sgTET2-2	F	CACCGAGCCGTCAGCCAAATGTCTC
	R	AAACGAGACATTTGGCTGACGGCTC
<b>qRT-PCR primers</b>		
TET1-MUS	F	GAGCCTGTTCCCTCGATGTGG
	R	CAAACCCACCTGAGGCTGTT
TET2-MUS	F	ACGGTGCTGCTGGATTCATTCAAAG
	R	ACTTCTGGATGAGGTCTCTCTGCTA
TET3-MUS	F	CCGGATTGAGAAGGTCATCTAC
	R	AAGATAACAATCACGGCGTTCT
WDR26-MUS	F	AGTCAGGATGTCGTTTAGAGCA
	R	ACAATAGCGTGAGGAGAATGC
ARMC8-MUS	F	AGACTGAAACTATGATGGACCGA
	R	ACCGCATGATCCTGGAAACTG
MKLN1-MUS	F	CCCTACGCGCTGCATAAGT
	R	GGGAGGATAGTTGCTCTCTGAA
MAEA-MUS	F	AAGACCTTGAGTAGTTGCCCA
	R	TGCTCGATCCTACGTTTGCAG
RANBP9-MUS	F	AGACTACCAGGTTGGGATAAACA
	R	AGTTGGTCCATACGGTTGTCC
TUJ1-MUS	F	GCGCCTTTGGACACCTATTCA
	R	GCCCTCCGTATAGTGCCCT
GAPDH-MUS	F	CATGGCCTTCCGTGTTTCCTA
	R	GCCTGCTTCACCACCTTCTT

30

### Reagents

Name	Cat. No	Manufacturer
Retinoic Acid	R2625	Sigma
DMEM	sh30022.01b	HyClone

B27	a1486701	Gibco
FBS	sh30084.03hi	HyClone
DME/F-12 1:1	SH30023.01	HyClone
NcmECL Ultra	P10300B	NCM Biotech
Accutase	AT-104	Stem Cell
PL Transfection Reagent	FT301-01	Transkntro
2× SBYR	B21702	Bimake
ABScript III RT Master Mix for q PCR	RK20428	Abclonal
Deoxyribonuclease	DN25-1G	Sigma
Poly -L-ornithine hydrobromide	P3655	Sigma
Laminin	L2020	Sigma
bFGF	100-18b-50	Peptotech
EGF	100-15	Peptotech
CHX	66-81-9	Selleck
PEI	PR40001	proteintech
MG132	1211877-36-9	Selleck
Z-VAD	187389-52-2	Selleck
CALPEPTIN	117591-20-5	Selleck
RNAiso Plus	9109	Takara