

Supplementary File 1

sgRNA sequences

sg <i>Trp53</i> (mouse)	ACCCTGTCACCGAGACCCC
sg <i>Kmt2c.1</i> (mouse)	AATCAGTGCCAACCAATGGC
sg <i>Kmt2c.2</i> (mouse)	CAGGTTGAAGACAAAAAGTA
sg <i>Chrom8</i> (mouse)	ACATTTCTTTCCCACTGG
sgGFP	GAATAGCTCAGAGGCCGAGG
sgKMT2C.1 (Human, for CRISPR)	CCCGCGCGTCAGGCCCGTC
sgKMT2C.2 (Human, for CRISPR)	CAGGCCCGTCAGGCCCGGG

shRNA sequences

sh <i>Renilla</i>	AGGAATTATAATGCTTATCT
sh <i>Kmt2c.1</i> (mouse)	GGAGACAAATATGTAGAGTT
sh <i>Kmt2c.2</i> (mouse)	ACCAGTGATCACTTTACTAA
sh <i>Cdkn2a</i> (mouse)	AACACAAAGAGCACCCAGCGG

qPCR primers sequences

<i>Actb</i> (mouse)-Forward	GGCTGTATTCCCCTCCATCG
<i>Actb</i> (mouse)-Reverse	CCAGTTGGTAACAATGCCATGT
<i>Cdkn2a</i> - <i>Ink4a</i> (mouse)-Forward	CCATCTGGAGCAGCATGGAGT
<i>Cdkn2a</i> - <i>Ink4a</i> (mouse)-Reverse	ACGTGAACGTTGCCCATCATC
<i>Cdkn2a</i> - <i>Arf</i> (mouse)-Forward	CGCTTCTCACCTCGCTTGTC
<i>Cdkn2a</i> - <i>Arf</i> (mouse)-Reverse	CAGTGACCAAGAACCCTGCGA
<i>Kmt2c</i> (mouse)-Forward	CAGGAGGGCCTGCAAGATAC
<i>Kmt2c</i> (mouse)-Reverse	TATCCTCCGGTTGGAGCTGA
<i>ACTB</i> (Human)-Forward	AAGAGCTACGAGCTGCCTGA
<i>ACTB</i> (Human)-Reverse	TCCATGCCCAGGAAGGAAGG
<i>CDKN2A</i> - <i>INK4A</i> (Human)-Forward	GAGCAGCATGGAGCCTTCGG
<i>CDKN2A</i> - <i>INK4A</i> (Human)-Reverse	TGGATCGGCCTCCGACCGTAA
<i>CDKN2A</i> - <i>ARF</i> (Human)-Forward	GCAGGTTCTTGGTGACCCTC
<i>CDKN2A</i> - <i>ARF</i> (Human)-Reverse	TAGACGCTGGCTCCTCAGT
<i>KMT2C</i> (Human)-Forward	GAAACGCTGTAGCCTGTCCT
<i>KMT2C</i> (Human)-Reverse	CCCTGAGTCTCCTTTGGCAG
<i>KMT2D</i> (Human)-Forward	GCCCTTTCTTCAAGGTGGACT
<i>KMT2D</i> (Human)-Reverse	CGGGTTCCGGGCTAAAGAAG
<i>TP53</i> (Human)-Forward	TGACACGCTTCCCTGGATTG
<i>TP53</i> (Human)-Reverse	TCATCCATTGCTTGGGACGG

ChIP-qPCR primers sequences

<i>Cdkn2a</i> -Ink4a promoter (mouse)- Forward	GATGGAGCCCGGACTACAGAAG
<i>Cdkn2a</i> -Ink4a promoter (mouse)- Reverse	CTGTTTCAACGCCAGCTCTC
<i>Cdkn2a</i> -Arf promoter (mouse)-Forward	GACCGTGAAGCCGACCCCTTCAGC
<i>Cdkn2a</i> -Arf promoter (mouse)-Reverse	GGGGTCGCTTCCCTTCGG