

SUPPLEMENTARY TABLES

Supplementary Table 1. The amplification reaction system of genotyping of mice.

Reagents	Volume
r Taq DNA polymerase	0.2 μ l
10 \times PCR buffer	1 μ l
DNA	1 μ l
dNTP	0.2 μ l
Primer-Forward (100 ng/ μ l)	0.2 μ l
Primer-Reverse (100 ng/ μ l)	0.2 μ l
ddH ₂ O	7.2 μ l

Supplementary Table 2. The amplification reaction condition of genotyping of mice.

Cycle	Temperature	Time
1	94° C	5 min
	94° C	30 s
38	59° C	30 s
	72° C	15 s
1	72° C	10 min
1	4° C	Forever

Supplementary Table 3. Primers in methyltarget sequencing for validation of DNA methylation status.

Primers	Sequence
En1_1_F	GATAGGTTTAGTTAGTGATTTGGTTTTG
En1_1_R	ACCTTTCTAACTAAAAYCTTCTCTACATTC
En1_2_F	GGAGAGGTTTTTGTATTAAAGTTTTAGTTTAG
En1_2_R	CAACCAAACCCACCAATCTAAC
En1_3_F	TATTYGGGAAAAGAGGAAATGT
En1_3_R	AAAACCTCTATATTAAATTTCCCTACAAA
Fbxo41_F	TTTAGTYGTTTTAGTTTTYGGTTTATTTTTAG
Fbxo41_R	AAAAACTAACTAAACCDAAACTCRTACC
Frzb_1_F	GTTATTGTTTTTAGGAGGTTGTTATTTTTG
Frzb_1_R	CACACCTTTCCCCACTCC
Frzb_2_F	TTATTAAGTTTTGTAAGTTTGTGTGTGAG
Frzb_2_R	ACAAACTAACCRATAAAAACAAATAACTAAC
Nkx2-1_1_F	AGTAAGTGTATTTTTGTATGGTTGAGTTT
Nkx2-1_1_R	CCCAACACCCCAACTCAA
Nkx2-1_2_F	GGTAATTTGGGTAATATGAGYGAGTTGT
Nkx2-1_2_R	CAATACCCTCACCCCACTCC
Nkx2-1_3_F	TTGGTGGTTTGGGTGTGTT
Nkx2-1_3_R	CAACAACAACAAACTCAACAACAA
Rara_1_F	TGGGAAGGTGGTATTATTTTTGG
Rara_1_R	CACACTTCTAATTCTCCACCTAAAA
Rara_2_F	AATTGTTAYGAGTGAAGGTTAAGAGG
Rara_2_R	ACAAAACAAATCTATTCCTAAAACCATC
Syng1_F	GGTGGTTTTGGAGTAGGTTTTTTTT
Syng1_R	AACCCAAAAACAACCTCTAAAC
Otx1_F	TTCGYGTTATTTTTGTAGGTTTTTAGTTTT
Otx1_R	AACCRAAAATAATAACAACCTAATCCT

Supplementary Table 4. Primers in qRT-PCR for detection of gene transcription.

Gene	Primers	Product size
<i>GAPDH</i>	F: 5' GGTTGTCTCCTGCGACTTCA 3' R: 5' TGGTCCAGGGTTTCTTACTCC 3'	183bp
<i>Otx1</i>	F: 5' ACCTTCCTTCTCCGAAATCTG 3' R: 5' GGACTGCCTTACATCTCAACAA 3'	149bp
<i>En1</i>	F: 5' AAGAACGAGAAGGAAGACAAGC 3' R: 5' ATATAGCGGTTTGCCTGGAA 3'	92 bp
<i>Nkx2-1</i>	F: 5' CGAGATATTCGCCTCCTCCC 3' R: 5' GATTCGGCGTTCGGCTGG 3'	248bp
<i>Frzb</i>	F: 5' ATGATGTGACCGCCGTTGT 3' R: 5' CGTTCCTCGTCTTCATAGCC 3'	160bp
<i>Syngn1</i>	F: 5' CAGTGTCAAGGACCGCAAGA 3' R: 5' GGAAGCAGAAACCCACGAAC 3'	89 bp
<i>Fbxo41</i>	F: 5' TCTTCTGTATCTTACCTACCTGG 3' R: 5' TGGAACAGACTCGGGCATT 3'	135bp
<i>Rara</i>	F: 5' CAGTGCCATCTGCCTCATCT 3' R: 5' CATCAGCATCTTGGGGAACAT 3'	151bp

Supplementary Table 5. Primers in BSP for detection of DNA methylation status in 3 months and 19 months mice.

Primers	Primers sequence	Product size
<i>En1-2</i>	F AGAAGTTTTAGAAAGTTGGAGAGAT R TTTCCCACCCAATATCCTATTTAAA	391bp
<i>En1-3</i>	F ATATTGGGTGGGAAAGGTTTT R AATATACCTCCTTACAAAACCTAAAT	443bp
<i>Otx1</i>	F GGTGGTATTTAAGATTAATTTGTTAG R ATTACATTCCCAAACCTTCTC	671bp
<i>Nkx2-1-1</i>	F GTAGGTAAAGATTTGGTTTTAGA R AAAACCTAACCCCTACAACCC	429bp
<i>Nkx2-1-2</i>	F TTGGTAGGTTGATTTGAGTGT R CCTATTTCTATCCACCTCTACTCTA	462bp