

**Supplementary Table 2: List of primers used for Piggybac cloning, qRT-PCR and genotyping.**

piggyback Cloning

mTRIM24-FL F	CACCATGGAGGTGGCTGTGGAGAAG
mTRIM24-3XFlag-R	TACTTGTCATCGTCATCCTTGTAATCGATATCATGATCTTTATAATCACCGTCATG GTCTTTGTAGTCCTTAAGCAGCTGGCGATCCTCGGTG

qRT-PCR	
TRI24 F	CGGCCGGTGGTCCTT
TRI24 R	CAAACCTGGCATCGAATGAC
VIMF1	CAGGCCAAGCAGGAGTCAAA
VIMR1	CTCCAGGGACTCGTTAGTGC
CDH1F1	AACCCAAGCACGTATCAGGG
CDH1R1	GAGTGTTGGGGGCATCATCA
TRP53F1	CATCCTGGCTGTAGGTAGCG
TRP53R1	TGGCAGTCATCCAGTCTTCG
MifF1	CGGACCGGGTCTACATCAAC
MifR1	GGA CTCAAGCGAAGGTGGAA
Vtn1F1	TGGGGCAGATCATCTTTTGGGA
Vtn1R1	CGTGATGAAAGTGCTTGCCTGA
CDKN2aF1	CGCTCTGGCTTTCGTGAAC
CDKN2aR1	TTGCCCATCATCATCACCTGG
FN1F1	TACGCCATTGGAGAGGAGTG
FN1R1	GGCACCATTTAGATGAATCGCA
Aldh1A1F1	TCAGGAGTTTACATCAACTGGGA
Aldh1A1R1	ACCCCAAAC TCCAACCAAGA
Lgals1F1	GCCAAGAGCTTTGTGCTGAA
Lgals1R1	TGGGCATTGAAGCGAGGATT
LTKF1	CTACAGCCTCTGGCAGTCAC
LTKR1	TGGCAGTCTTTGAAAGGGCA
SYT9F1	GACCCAGATATCTCTGTGAGCCTG
SYT9R1	AGACACCAAAAAGGGCCAGA
SNCGF1	GTATGTGGGCACCAAAAACCA
SNCCR1	CAGCTTCACTCACGGCATTG
cMETF1	GTGCCCCGAAGTGTAAGTCCA
cMETR1	TGCATGCTCCATTCTGAGAGG
cMETF2	TGATCATTGGTGCGGTCTCA
cMETR2	AGCGAACTAATTC ACTGCCCA
aktF1	GCCGCCTGATCAAGTTCTCC
aktR1	TTCAGATGATCCATGCGGGG
mTORF1	CCGCTACTGTGTCTTGGCAT
mTORR1	CAGCTCGCGGATCTCAAAGA
pi3kcaF1	TGCAGAGGGTCAGAGCAATG
pi3kcaR1	CTAGGATTCGTGGGGGCATC
pi3kcaF2	TCATGGATGCTTTGCAGGGT
pi3kcaR2	AACCACAGTGGCCTTTTTGC

## Genotyping Primers

Trim24 F (P23)	AATGAAGACTGGTGTGCTGTTTGT
Trim24 R (P24)	TCGTCTGAGTCGTCACTGAACTTAC
Cre F	GCGGTCTGGCAGTAAAACTATC
Cre R	GTGAAACAGCATTGCTGTCACTT
P53 X6	AGCGTGGTGGTACCTTATGAGC
P53 X7	GGATGGTGGTATACTCAGAGCC
P53 Neo	GCTATCAGGACATAGCGTTGGC