

Supplementary Information

Efficient Single Base Editing in Mouse Using Cytosine Base Editor 4

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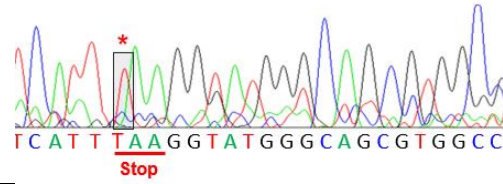
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Supplementary Tables:

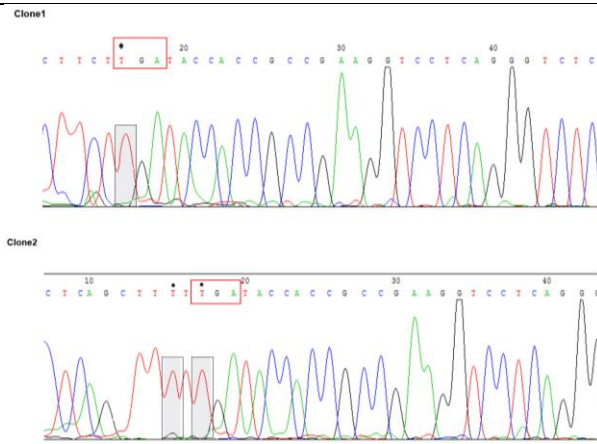
sgRNA	Primer Sequences (5'-3')
EGFP-sgRNA1	Forward: 5'- CAAGCAGAAGAACGGCATCA -3'
	Reverse: 5'- TGATGCCGTTCTTCTGCTTG -3'
EGFP-sgRNA2	Forward: 5'- TACCAGCAGAACACCCCAT -3'
	Reverse: 5'- ATGGGGGTGTTCTGCTGGTA -3'
Dip2a-gRNA-1	Forward: 5'- CATTCAAGGTATGGGCAGCG -3'
	Reverse: 5'- CGCTGCCCATACCTTGAATG -3'
Dip2a-gRNA-2	Forward: 5'- CTGTGCGAGGCATTCCTCGA -3'
	Reverse: 5'- TCGAGGAATGCCTCGCACAG -3'
Dip2c-gRNA-1	Forward: 5'- CTTCTCGATAACCACCGCCGA -3'
	Reverse: 5'- TCGGCGGTGGTATCGAGAAG -3'
Dip2c-gRNA-2	Forward: 5'- GGTCTCGAGATGAACGTTAT -3'
	Reverse: 5'- ATAACGTTTCATCTCGAGACC -3'
Tyr-sgRNA	Forward: 5'- AGAAATTCGAGAATACTG -3'
	Reverse: 5'- CAGTTAGTTCTCGAATTCT -3'

Gene	Primer Sequences (5'-3')	Amplicon (bp)	Annealing temperature (°C)
<i>Tyrosinase</i>	Forward: 5'- ACAGAGAAGCGAGTCTTGATTAG -3'	742	57
	Reverse: 5'- GTGAACCAATCAGTCCTTGTTTATAG -3'		
Dip2a-gRNA-1-Screening	Forward: 5'- TGACCAGTCAGTCACCTAGCC -3'	371	59
	Reverse: 5'- ACCACCAAGCTACATCCACA -3'		
Dip2c-gRNA-1,2-Screening	Forward: 5'- TAGGAGTGGACCAAGCTCTGC -3'	295	56
	Reverse: 5'- AGAGCAGCTATGTACTGAATGG -3'		

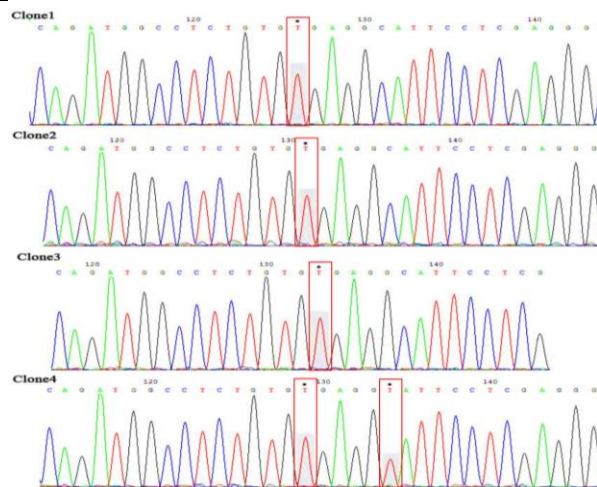
Gene	Real-Time PCR Primer Sequences (5'-3')	Amplicon (bp)	Annealing temperature (°C)
<i>Dip2a</i>	Forward: 5'-GTGCTCGCGTACTTGGACTT-3'	204	60
	Reverse: 5'-GTGCCAGAGTAGACGCTG-3'		
<i>Dip2c</i>	Forward: 5'-GCTGAGGAGGCTAAGGAGAAA-3'	213	60
	Reverse: 5'-GAGAGCCATGCCTCCAG-3'		



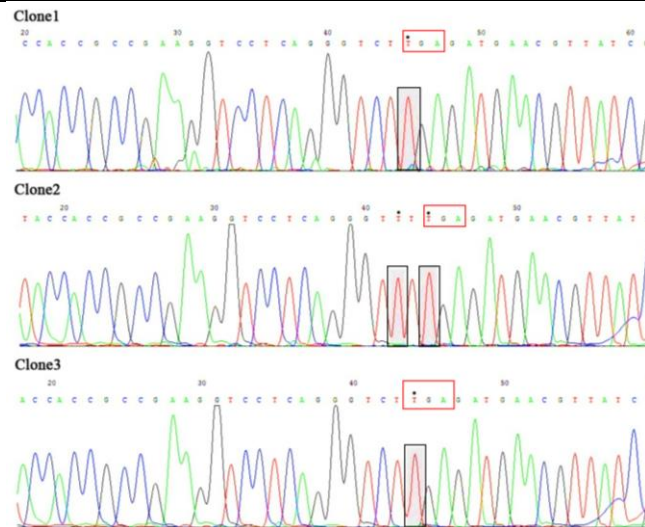
Supplementary Fig. 2S. Sanger sequencing results of Dip2a-sgRNA-1 containing edited nucleotide.



Supplementary Fig. 3S. Sanger sequencing results of Dip2c-sgRNA-1 containing edited nucleotide.



Supplementary Fig. 4S. Sanger sequencing results of Dip2a-sgRNA-2



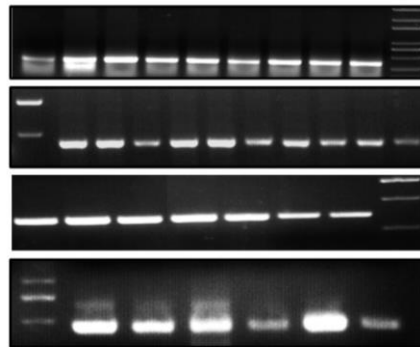
Supplementary Fig. 5S. Sanger sequencing results of Dip2c-sgRNA-2

Dip2a-gRNA-1

Dip2a-gRNA-2

Dip2c-gRNA-1

Dip2c-gRNA-2



Supplementary Fig. 6S. Expression of Dip2a and Dip2c genes from WT and mutated clones