

GENOTYPING PROTOCOL

MUTANT MOUSE RESOURCE & RESEARCH CENTER: UC DAVIS

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530-754-MMRRC

Protocol Name: CR888 Aoah

Protocol: GoTaq® G2 Colorless Master Mix(Promega)

Reagent/Constituent	Volume (μL)
Water	4.5
GoTaq® G2 Colorless Master Mix,2X	7.5
Primer 1. (stock concentration is 20μM) comF	0.5
Primer 2. (stock concentration is 20μM) wtR	1.0
Primer 3. (stock concentration is 20μM) mutR	0.25
DNA (example) extracted w/ "Qiagen DNeasy columns or other similar silica based kits"	1.5
TOTAL VOLUME OF REACTION:	15.00 μL

Comments on protocol:

- Protocol may work with other DNA extraction methods.

Strategy:

Steps	Temp (°C)	Time (m:ss)	# of Cycles
1. Initiation/Melting HOT START? ☐	94	2:00	1x
2. Denaturation	94	0:10	
3. Annealing steps 2-3-4 cycle in sequence	65 (↓1°C/cycle)	0:30	10x
4. Elongation	68	2:00	
5. Denaturation	94	0:15	
6. Annealing steps 5-6-7 cycle in sequence	55	0:30	25x
7. Elongation	68	2:00 (↑20sec/cycle)	
8. Finish	4	∞	n/a

Primers:

Electrophoresis Protocol:

Name	Nucleotide Sequence (5' - 3')	Agarose: 1.5%	V: 90
1. SEQ-Aoah-F	AGTGTGGTTCCTGGTACAGCTCAGG	Estimated Running Time: 90 min.	
2. SEQ-Aoah-R2	ATTGTGCAAGCAAAGTACCAGACC	Primer Combination	Band (bp)
3. CpGf-LacZ-R	CTGTCCTGGCTTCCTCAGAGTTCC	1 & 2	214
		1 & 3	323
			Genotype
			wildtype
			mutant

Allele Description: Exon 1

(ENSMUSE00000331295) has an in-frame LacZ insertion in the Aoah gene (ENSMUST00000021757.4) using CRISPR Cas9 gene editing technology in mouse zygotes. Subsequent founders were backcrossed to C57BL6/N to produce sequence confirmed heterozygous animals.

***Note:** Capillary image primer concentrations are equimolar.

