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Rasal2 (MEBJ EPD0732_1_H11)

Allele: Rasal2^{tm1a(EUCOMM)Wtsi}

Genotyping Information

These mice may be genotyped through a combination of separate PCR reactions that detect *LacZ*, the gene-specific wild type allele, and a mutant allele-specific short range PCR. Interpretation of the consolidated results produces the genotype of the mice.

For example: *LacZ* positive, mutant positive, wild type positive = heterozygous.

> PCRs primer pairs and expected size bands

| PCR type | Forward primer | Reverse primer | Expected size band (bp) |
|---------------|----------------|----------------|-------------------------|
| Mutant PCR | Rasal2_80958_F | CAS_R1_Term | 188 |
| Wild type PCR | Rasal2_80958_F | Rasal2_80958_R | 289 |
| LacZ PCR | LacZ_2_small_F | LacZ_2_small_R | 108 |

Primer sequences

| Primer name | Primer sequence (5' > 3') | | |
|----------------|---------------------------|--|--|
| CAS_R1_Term | TCGTGGTATCGTTATGCGCC | | |
| Rasal2_80958_F | TTTAATCATTGCATACATGACCTG | | |
| Rasal2_80958_R | AGCAACAGAAATGACACCTCA | | |
| LacZ_2_small_F | ATCACGACGCGCTGTATC | | |
| LacZ_2_small_R | ACATCGGGCAAATAATATCG | | |

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Reaction

| Reagent | μΙ |
|------------------------------------|-------------|
| DNA (~50-100 ng) | 1.0 |
| 10x Buffer | 2.0 |
| MgCl ₂ (50 mM) | 0.6 |
| PtTaq (Platinum® Taq (Invitrogen)) | 0.2 |
| dNTPs (100 mM) | 0.2 |
| Primer 1 (10 μM) | 0.4 |
| Primer 2 (10 μ M) | 0.4 |
| H ₂ 0 | <u>15.2</u> |
| Total | 20.0 |

Cycling conditions

Wild type and mutant PCRs

LacZ PCR

| Cycle | | | Cycle | | |
|-------|-------|-------------|-------|-------|-------------|
| 1 | 94 °C | 5 min | 1 | 94 °C | 5 min |
| 2 | 94 °C | 30 sec | 2 | 94 °C | 30 sec |
| 3 | 58 °C | 30 sec | 3 | 60 °C | 30 sec |
| 4 | 72 °C | 45 sec | 4 | 72 °C | 30 sec |
| 5 | | · 34 cycles | 5 | | - 34 cycles |
| 6 | 72 °C | 5 min | 6 | 72 °C | 5 min |
| 7 | 12 °C | forever | 7 | 12 °C | forever |

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