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Sms (MBCD; EPD0069_4_H07)

Allele: Sms^{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 | Sms_40536_F | CAS_R1_Term x | 155 |
| Wild type PCR | Sms_40536_F | Sms_40536_R | 305 |
| LacZ PCR | LacZ_2_small_F | LacZ_2_small_R | 108 |

Primer sequences

| Primer name | Primer sequence (5' > 3') | | |
|----------------|---------------------------|--|--|
| CAS_R1_Term | TCGTGGTATCGTTATGCGCC | | |
| Sms_40536_F | TATGTCAAAGCGGGAAAGGG | | |
| Sms_40536_R | AACCCCGGACACTCACAATC | | |
| LacZ_2_small_F | ATCACGACGCGCTGTATC | | |
| LacZ_2_small_R | ACATCGGGCAAATAATATCG | | |

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Reaction

| Reagent | μΙ |
|---|---|
| DNA (~50-100 ng) 10x Buffer MgCl ₂ (50 mM) PtTaq (Platinum Taq (Invitrogen)) dNTPs (100 mM) Primer 1 (10 μ M) Primer 2 (10 μ M) H ₂ 0 Total | 1.0 2.0 0.6 0.2 0.2 0.4 0.4 <u>15.2</u> 20.0 |
| lotai | 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 | Go to '2' + | - 34 cycles |
| 6 | 72 °C | 5 min | 6 | 72 °C | 5 min |
| 7 | 12 °C | forever | 7 | 12 °C | forever |

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