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# Smyd5 (MEBR EPD0027\_5\_A02)

Allele: Smyd5<sup>tm1a(EUCOMM)Wtsi</sup>

### **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    | Smyd5_F        | CAS_R1_Term    | 312                     |
| Wild type PCR | Smyd5_F        | Smyd5_R        | 582                     |
| LacZ PCR      | LacZ_2_small_F | LacZ_2_small_R | 108                     |

#### Primer sequences

| Primer name    | Primer sequence (5' > 3') |  |
|----------------|---------------------------|--|
| CAS_R1_Term    | TCGTGGTATCGTTATGCGCC      |  |
| Smyd5_F        | GGTCTCATGGGGAACTGAGG      |  |
| Smyd5_R        | GCTTTCAGCCAAGCCAAGTC      |  |
| 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 <sub>2</sub> (50 mM)          | 0.6         |
| PtTaq (Platinum® Taq (Invitrogen)) | 0.2         |
| dNTPs (100 mM)                     | 0.2         |
| Primer 1 (10 μM)                   | 0.4         |
| Primer 2 (10 μM)                   | 0.4         |
| $H_2O$                             | <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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