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Cdc42bpa (MFHJ; EPD0431_1_F11)

Allele: Cdc42bpa^{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 | Cdc42bpa_49426_F | CAS_R1_Term | 315 |
| Wild type PCR | Cdc42bpa_49426_F | Cdc42bpa_49426_R | 487 |
| LacZ PCR | LacZ_2_small_F | LacZ_2_small_R | 108 |

Primer sequences

| Primer name | Primer sequence (5' > 3') | |
|------------------|---------------------------|--|
| CAS_R1_Term | TCGTGGTATCGTTATGCGCC | |
| Cdc42bpa_49426_F | GAACACATGCTGCCCTTGC | |
| Cdc42bpa_49426_R | TGCTGCTTTTGTCATTTGCC | |
| LacZ_2_small_F | ATCACGACGCGCTGTATC | |
| LacZ_2_small_R | ACATCGGGCAAATAATATCG | |

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Last updated: 07/03/2013



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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 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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