

EMMA ID: 04329

Gene: *Jmjd6*

Common name: *Jmjd6 tm1.1 Gbf*

Allele: *Jmjd6^{tm1.1Gbf}*

Genotyping Information

Genotyping by end-point PCR based on gel is composed of a genespecific short range PCR using primers on wild type allele and a mutant allele-specific short range PCR. The combined results show the genotype of the mice. For example: mutant positive, wild type positive = Heterozygous.

PCR primer pairs and expected size bands

| Assay | Forward Primer | Reverse Primer | Expected Size Band (bp) |
|----------|----------------|----------------|-------------------------|
| Wildtype | Jmjd6-F15 | Jmjd6-R15 | 300 |
| Mutant | Jmjd6-R14 | Jmjd6Neo-R2 | 350 |

Primer sequences

| Primer Name | Sequence 5' --> 3' |
|-------------|------------------------|
| Jmjd6-F15 | GACACTGTCCATGGCAAACAC |
| Jmjd6-R14 | TAAAGTCGCCTTCCAGAAGATT |
| Jmjd6-R15 | TCATGCATGCTGTCTTCAGAG |
| Jmjd6Neo-R2 | CCACACGCGTCACCTTAATA |

PCR setup (Qiagen, Hot Start Plus)

| Component | Volume (µl) 1x | Final conc. |
|---------------------------|----------------|-------------|
| DNA (~ 50-100 ng) | 2 | |
| Q-Solution (5x) | 2,5 | 0,5 |
| PCR-Buffer (10x) | 2,5 | 1 |
| DNTP mix (10 mM) | 0,5 | 0,2 |
| MgCl ₂ (25 mM) | 1,5 | 1,5 |
| Primer 1 (10 pmol/µl) | 1 | 0,4 |
| Primer 2 (10 pmol/µl) | 1 | 0,4 |
| Taq Polymerase (5 U/µl) | 0,3 | 0,06 |
| H ₂ O* | 13,7 | |
| Final volume | 25 | |

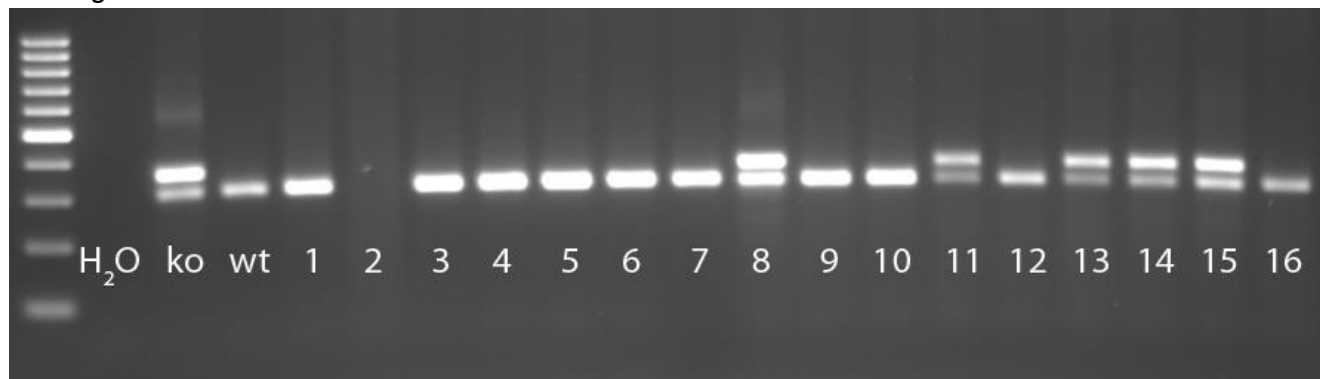
* The amount of H₂O is adjusted with the number of primer.

Amplification conditions

| PCR Settings | Temperature (°C) | Time | # of cycles |
|--|------------------|--------|-------------|
| 1 Denaturation (Melting) | 95°C | 5 min | 1 |
| 2 Amplification (Melting, Annealing, Polym.) | 94°C | 30 sec | 39 |
| | 59°C | 45 sec | |
| | 72°C | 45 sec | |
| 3 Polymerisation | 72°C | 10 min | 1 |
| 4 Cooling | 4°C | hold | 1 |

These PCR conditions have been optimized for our methods and preparation kits. Adaptions may be required.

Gel Image



Separated by gel electrophoresis on a 2% agarose gel.