

## Genotyping Report

|           |           |             |              |                    |             |
|-----------|-----------|-------------|--------------|--------------------|-------------|
| Strain ID | T035968   | Strain Type | KO(Cas9)     | Genetic Background | C57BL/6JGpt |
| Designer  | Zifan Lin | Gene Name   | <i>Gtf2i</i> |                    |             |

### 1. Strategy of Genotyping



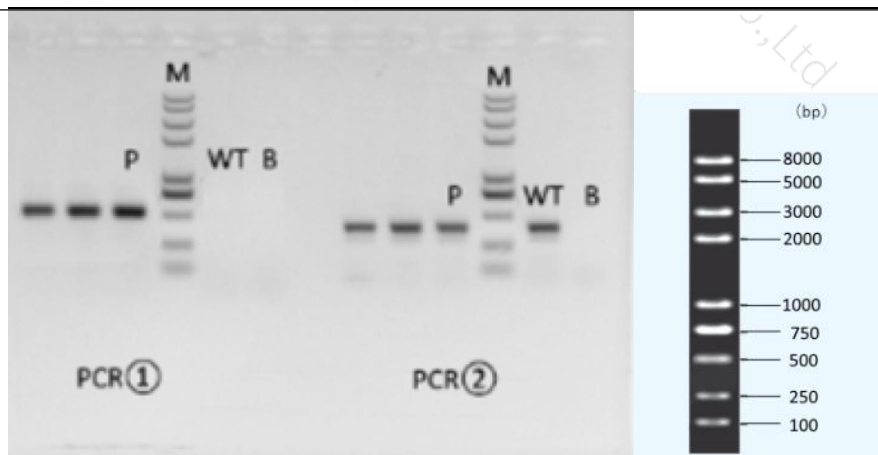
Wild type: ①PCR reaction obtains a single WT band; ②PCR reaction obtains a single WT band.  
Heterozygote: ①PCR reaction obtains a WT band and a KO band; ②PCR reaction obtains a WT band.  
Homozygote: ①PCR reaction obtains a single KO band; ②PCR reaction without product.  
Note: 1)The sizes of WT and Targeted band are shown below.  
2) If the WT band is too large, it may not be possible to obtain a WT band.

### 2. Primer Information

| PCR No. | Primer No. | Sequence                 | Band Size             |
|---------|------------|--------------------------|-----------------------|
| PCR①    | T035968-F1 | TGCACGTCTGCAAATCTGAGTTTG | WT:1788bp<br>KO:564bp |
|         | T035968-R1 | ACTTTCCTGGGAACAATCACCCAG |                       |
| PCR②    | T035968-F2 | TTAGACACCAGCCTCCGAACCTT  | WT: 372bp<br>KO:0bp   |
|         | T035968-R2 | ACTTTCCTGGGAACAATCACCCAG |                       |

### 3. Gel Image

tggtgttttgattttgtttgacccccagc---1224bp---tgctgttaggggcaggtgatgacctctagc



Note: P: Heterozygous samples; WT: Wildtype control; B: Blank control (ddH<sub>2</sub>O); M: DNA Ladder

① Control (WT) : It is an important reference mark for whether the PCR reaction is successful and whether the product band position and size meet the theoretical requirements.

② Control (B) : PCR amplification was performed without template in the PCR reagent to monitor whether the reagent was contaminated.

#### 4. PCR Condition

| PCR Reaction Component             |                                        |      |             |
|------------------------------------|----------------------------------------|------|-------------|
| Seg.                               | reaction component                     |      | Volume (μl) |
| 1                                  | 2 × Rapid Taq Master Mix (Vazyme P222) |      | 12.5        |
| 2                                  | ddH2O                                  |      | 9.5         |
| 3                                  | Primer A(10pmol/μl)                    |      | 1           |
| 4                                  | Primer B(10pmol/μl)                    |      | 1           |
| 5                                  | Template(20~80ng/μl)                   |      | 1           |
| PCR program I (priority selection) |                                        |      |             |
| Seg.                               | Temp.                                  | Time | Cycle       |
| 1                                  | 95℃                                    | 5min | 20×         |
| 2                                  | 98℃                                    | 30s  |             |
| 3                                  | 65℃*（-0.5℃/cycle）                      | 30s  |             |
| 4                                  | 72℃                                    | 45s* |             |
| 5                                  | 98℃                                    | 30s  | 15×         |
| 6                                  | 55℃*                                   | 30s  |             |
| 7                                  | 72℃                                    | 45s* |             |
| 8                                  | 72℃                                    | 5min |             |
| 9                                  | 10℃                                    | hold |             |
| PCR program II (the second choice) |                                        |      |             |
| Seg.                               | Temp.                                  | Time | Cycle       |
| 1                                  | 95℃                                    | 5min |             |

|   |       |      |     |
|---|-------|------|-----|
| 2 | 98℃   | 30s  | 35× |
| 3 | 58℃ * | 30s  |     |
| 4 | 72℃   | 45s* |     |
| 5 | 72℃   | 5min |     |
| 6 | 10℃   | hold |     |

Note\*: Annealing temperature and extension time can be determined according to the actual amplification situation and amplification enzyme efficiency.