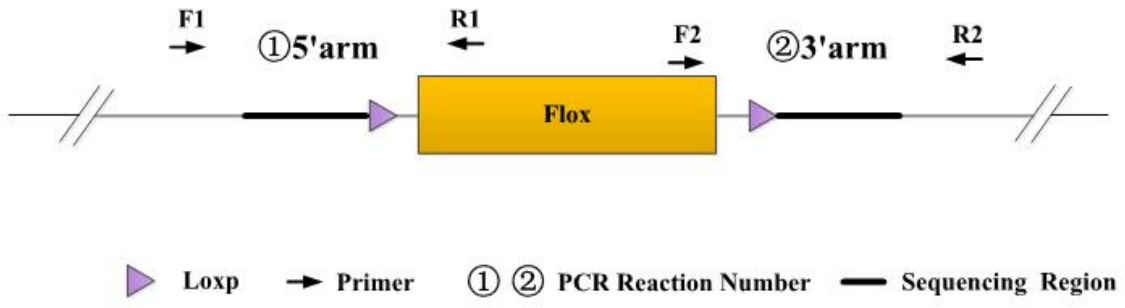
# Genotyping Report

| Strain ID | T016298 | Strain Type | CKO(Cas9) | Genetic Background | C57BL/6JGpt |
|---|---|---|---|---|---|
| Designer | Ya'nan Xu | Gene Name | *Shank2* | | |

## 1. Strategy of Genotyping

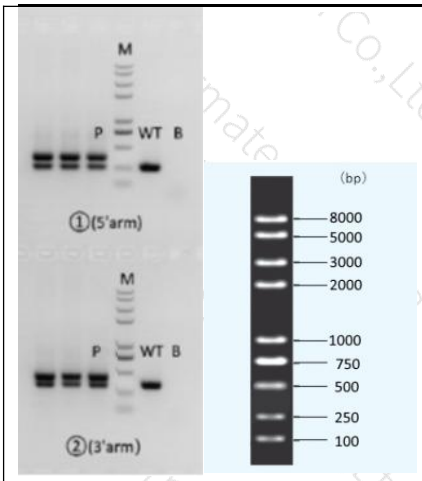



Wild type: ①PCR reaction obtains a single WT band; ②PCR reaction obtains a single WT band.
Heterozygote: ①PCR reaction obtains a WT band and a Targeted band; ②PCR reaction obtains a WT band and a Targeted band.
Homozygote: ①PCR reaction obtains a single Targeted band; ②PCR reaction obtains a single Targeted band.
Note: The sizes of WT and Targeted band are shown below.

## 2. Primer Information

| PCR No. | Primer No. | Primer Name | Sequence | Band Size |
|---|---|---|---|---|
| ①(5'arm) | F1 | T016298(P2)-F1 | CTGTGACTAGTCATCCTACCTAGACCAC | WT:249bp<br>Targeted:354bp |
| | R1 | T016298(P2)-R1 | TCTGCTGGTTAGACACACCTGGAA | |
| ②(3'arm)<br>局部GC | F2 | T016298(P2)-F2 | TCAGCCATGTGGCAGTTACCTGT | WT:327bp<br>Targeted:433bp |
| | R2 | T016298(P2)-R2A | GGGAACCTGGCTTTCTATGACCAT | |

## 3. Gel Image & Conclusion




Note: P: Heterozygous samples; WT: Wildtype control; B: Blank control (dd$H_2O$); 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

**(Generally recommend to use Vazyme P222;If the sequences contain special structures such as GC% ≥ 60% or GC% ≤ 40%,recommend to use Vazyme P515.)**

| **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°C | 5min | |
| 2 | 98°C | 30s | 20× |
| 3 | 65°C*（-0.5°C/cycle） | 30s | |
| 4 | 72°C | 45s* | |
| 5 | 98°C | 30s | 15× |
| 6 | 55°C* | 30s | |
| 7 | 72°C | 45s* | |
| 8 | 72°C | 5min | |
| 9 | 10°C | 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.