

## ZKO448

Target Position: exon1

Sense Strand Sequence

GACATAGTCCGTCCCGAGCACC AATGCAGTCGGCTGAGTACGGAAGCGGTTCCGAGAGTCGA  
GCATACGGGACAAATGGGTCTTTTGTGACTCGGGCGGGCGCAACACATTTAGGCTCCTCTAC  
GCATTACAGCAGCGGTCCGGTGAATCTCAAAGTCGGGACGAGATCATCCAGCGAATGCAG  
GAGATGTTTTACATCTGGATCCAGAAGTCATTGCA TGGTGCTCTCAGAGGTTCGATTTTAAA  
Ggtgcatgaatgatcactcctgggtttaatttaaatcagtgtctgtctaacttaaagttcggttggggaagaatgtacgag  
gcagcacacagtactaaaa cgtctcaaggctcatacaattg

Uppercase: Exon/coding sequence

Lowercase: intron/noncoding sequence

atcg : Forward/Reverse primer

atcg : cas9 target site

### ZKO448a:16bp insertion

CLUSTAL format alignment by MAFFT G-INS-i (v6.850b)

```
WT          CCAGCGAATGCAGGAGATGTTTTACATCTGGATCCAGAAGTCATT-----
ZKO448a     CCAGCGAATGCAGGAGATGTTTTACATCTGGATCCAGAAGTCATTGGTGCTCTCAGAG
*****
```

```
WT          ---GCATGGTGCTCTCAGAGGTTCGATTTTAAAGgtg
ZKO448a     GAAGCATGGTGCTCTCAGAGGTTCGATTTTAAAGgtg
*****
```

### ZKO448b:1bp deletion

CLUSTAL format alignment by MAFFT G-INS-i (v6.850b)

```
WT          CCAGCGAATGCAGGAGATGTTTTACATCTGGATCCAGAAGTCATTGCATGGTGCTCTC
ZKO448b     CCAGCGAATGCAGGAGATGTTTTACATCTGGATCCAGAAGTCA-TTGCATGGTGCTCTC
*****
```

```
WT          AGAGGTTCGATTTTAAAGgtg
ZKO448b     AGAGGTTCGATTTTAAAGgtg
*****
```