

## ZKO449

Target Position: exon1

Sense Strand Sequence

GAAATGTGTACTGGTTGGGGACTGCGCAGTGGGTAAAACGGCACTTCTGGTACGGTTCACC  
TCTGAAACTTTCCAGATAGCTACAGACCTACTGTCTATGAGAACACTGGAGTTGATGTCTT  
CATGGAATGGAATCCAGATCAGTTTAGGACTGTGGGATACAGCAGGACATGATACATTCCGC  
CAAATCCGGCCCATGTCCTATCAAGACACCGATGTGGTCTTGCTGTGCTATTAGTAGCAA  
TCCAAGTCTTTAAATAATTTGCGGCACAAATGGATCGCTGAGGTGAGGGAATATCTGCCG  
AAGGTGCCAGTACTGGTTGTTGCCACACAGACAGACCATCGTGAGATGGGCCCCTATCGTG  
CTAACTGCACCAGTCCCAGAGGGCAAGCAGGTGGCACAGGAGATTCTGTGCCAAGGGAT  
ATCTGGAATGTTCTGGCCCTTAGCAATC

Uppercase: Exon/coding sequence

Lowercase: intron/noncoding sequence

atcg : Forward/Reverse primer

atcg : cas9 target site

### ZKO449a:17bp deletion

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

```
WT          AGCTACAGACCTACTGTCTATGAGAACACTGGAGTTGATGTCTTCATGGATGGAATCCAG
ZKO449a     AGCTACAGACCTACTGTCTATGAGAACACTGGAGTTGATGTCTTCAT-----
*****
```

```
WT          ATCAGTTTAGGACTGTGGGA
ZKO449a     ----GTTTAGGACTGTGGGA
*****
```

### ZKO449b:6bp deletion, 8bp insertion

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

```
WT          AGCTACAGACCTACTGTCTATGAGAACACTGGAGTTGATGTCTTCATGG--ATGGAATCC
ZKO449b     AGCTACAGACCTACTGTCTATGAGAACACTGGAGTTGATGTCTTGGATGTCTTGAATCC
***** . : * :*****
```

```
WT          AGATCAGTTTAGGACTGTGGGA
ZKO449b     AGATCAGTTTAGGACTGTGGGA
*****
```