

## ZK0222

Target Position: exon 1

Sense Strand Sequence

GCACATCACGGGAAAGCC TAGAACGGAGAGTTATGAGAAAGTAGACGATCTAAAAGAGCAC  
ATTAGGAATTTTAAGTTCAATGACCACTATGGCCGTTCCCGGACTCTCCGGTTCCTCTGGG  
ACTTCTGCGGTGTCGGTAAACTCTTCAGGACCGAGCCG TCTTCTCGAGTCCCGCTGAGGCT  
CCGCGTATCATCAACTCGCTGCCGAGCGGTGGGACCACAAACGAGTGCAAGATCGTGGAGGT  
TCACGGGGTTAAAGTGGCG TCTTTCAGTGTTGATGGGCA

Uppercase: Exon/coding sequence

Lowercase: intron/noncoding sequence

atcg : Forward/Reverse primer

atcg : cas9 target site

### ZK0222a: 1bp insertion

CLUSTAL format alignment by MAFFT FFT-NS-i (v7.215)

```
WT          GCGGTGTCCGGTAAACTCTTCAGGACCGAGCCGTTCTTCTCGAGTCCCGCTGAGGCTCC
ZK0222a     GCGGTGTCCGGTAAACTCTTCAGGACCGAGCCGTTCTTCTCGAGTCCCGCTGAGGCTCC
*****
```

```
WT          GCG
ZK0222a     GCG
***
```

### ZK0222b: 4bp deletion

CLUSTAL format alignment by MAFFT FFT-NS-i (v7.215)

```
WT          GCGGTGTCCGGTAAACTCTTCAGGACCGAGCCGTTCTTCTCGAGTCCCGCTGAGGCTCCG
ZK0222b     GCGGTGTCCGGTAAACTCTTCAGGACCGAGCCG-----TCTCGAGTCCCGCTGAGGCTCCG
*****
```

```
WT          CGTATC
ZK0222b     CGTATC
*****
```