

ZKO21

Target Position: exon 4

Sense Strand Sequence

ttgttcaaggcatcgtttgcgaacctcacacaaatccatgtttacctgtttatgctttattgcatatagttgtgcatatataa
atacacatgtacatatgcatgtattaatgtgggtttgtgtgtcagATGTGTCAGTGGTGGCCGTGCGGGGCC
CTGGCGATGGCATGGAGACAGATAAACCCCTGCCAGCCCCTGAGCAGCTGACGGAGGCCCC
GCTCCAGAAGATCTGCTCTCCTAAACACAGCCCGAGAGTGCCACCGGGTCTCCAGGAGTGC
TGCACCTGGGCAA GGTGAGCCGGGACGCCTGTTGGAGCTGGAGGCAGTGAGGATCGTGG
TTCCCCGGGCTGCCATCATCCGCACCGGGCGCTCAGGGGCGCACACTGATGACAGGGGGTCT
CCTCAACACGGGGACGAGCCTCCACCTGCTCCACCCTCACCTCCACCTCCAGCAGAGCCGCT
GCAGGAGTACAAGAACAGCCTGGAGAACTGCAGAGCTCAGAGAGA

Uppercase: Exon/coding sequence

Lowercase: intron/noncoding sequence

atcg : Forward/Reverse primer

atcg : cas9 target site

ZKO21a: 19bp insertion

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

```
WT          GGGTCTCCAGGAGTGTGCACCTGGGCAAGGTGAGCCGGGACGC-----
ZKO21a      GGGTCTCCAGGAGTGTGCACCTGGGCAAGGTGAGCCGGGACGCTCAGAGCCGGGACGCT
*****

WT          ---CTGTTTGGAGCTGGAGGCAGTGAGGATCGTGTTCCCCGGG
ZKO21a      CAGCTGTTTGGAGCTGGAGGCAGTGAGGATCGTGTTCCCCGGG
*****
```

ZKO21b: 2bp deletion, 7bp insertion

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

```
WT          TGCACCTGGGCAAGGTGAGCCGGGACGCCT-----GTTTGGAGCTGGAGGCAGTGAGGAT
ZKO21b      TGCACCTGGGCAAGGTGAGCCGGGACGCTCGAGGAGTTTGGAGCTGGAGGCAGTGAGGAT
*****

WT          CGTGGTCCCCGGG
ZKO21b      CGTGGTCCCCGGG
*****
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