

## ZKO471

Target Position: exon 1

Sense Strand Sequence

GCAGTGCCATTGTTATTGAAATAAAAAAGTCCTGACGATATAGAAGTGCCAAAACTGATCGTT  
CATGTGCAGGACCATGCGTGAATCTCCCGCCACCAGCTGCCCTCAGTTATGTATTCGCGGATT  
GTGAATGCCGTCATAAGTAACCGCCGAAACTCCGCCGTTGCGCTTGTGGCATTGTGGGAGT  
TGAGTTTTTTCCTTATCATTACAGCAGCAGAGTTGCGAGTTTCTGAATGCTCCGTA AAACTACAT  
GTCCAGCTGCCCTACATAAACACAAGCATGGCAGCCTCCACTTCA GGATACAGCGGTGTAC  
TCTTCAGGCTGAGGAAATATGCTAATAAATCACAAAGTTTATGCCATATTGGTAATTCTAACTTC  
ATAATAAGGACAACATGGACAACCGGATGCAAACATCAACATCAGCTAAATACACAGATTGAA  
AGttaggcatcaagtgtcctgcaaagtgtctgtagtagga caatcactccaatagacc

Uppercase: Exon/coding sequence

Lowercase: intron/noncoding sequence

atcg : Forward/Reverse primer

atcg : cas9 target site

### ZKO471a: 2bp insertion

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

```
WT          CAGCCTCCACTTCAGGATACAGCGGTGTACTC--TTCAGGCTGAGGAAATATGCTAATAA
ZKO471a     CAGCCTCCACTTCAGGATACAGCGGTGTACTCTGTTCAGGCTGAGGAAATATGCTAATAA
*****
```

### ZKO471b: 20bp insertion

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

```
WT          CAGCCTCCACTTCAGGATACAGCGGTGTACT-----CTTCAGGCT
ZKO471b     CAGCCTCCACTTCAGGATACAGCGGTGTACTTCAGGTGTACTTCAGGTGTACTTCAGGCT
*****
```

```
WT          GAGGAAATATGCTAATAAATC
ZKO471b     GAGGAAATATGCTAATAAATC
*****
```