

ZK0989

Target Position: exon4

Sense Strand Sequence

ggttgggcaat~~taacgac~~ctgttttcaatggaatcgtttttgttttttaaggcatcatttggctatattaataat
ttgatataattattcaaacctcggcgcgcatgtgtttctccagAGAATAGCGGAGAATGAGAAAAGTCTG
AAAAAGTGGGCAAACAGAAGGTGGACCCTCAGACGCTGCAGACTCTCCCACACGAGCGTA
CCTGGATCAGACGGTGGTTCCTATTCTCCTGCAGGGCTTGTTCGGTCTGGCCAAAGGAAAGgtc
tgtattagttagaaaggacagtttgcacaaaaacaaaattccgcatcattactctcccttactgtttgtttcttct
gtcaaacacgaaagaagatatttgaagaaagctggaaccggaaccattgacttcaataatattgttttctgctatg
gaagttgatgattacgggtt

Uppercase: Exon/coding sequence

Lowercase: intron/noncoding sequence

atcg : Forward/Reverse primer

atcg : cas9 target site

ZK0989a: 5bp deletion

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

```
WT          CCTGGATCAGACGGTGGTTCCTATTCTCCTGCAGGGCTTGTTCGGTCTGGCCAAGGAAAG
ZK0989a     CCTGGATCAGACGGTGGTTCCTATTCTCCT-----GCTTGTTCGGTCTGGCCAAGGAAAG
*****
```

ZK0989b:17bp deletion

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

```
WT          CCCACACGAGCGTACCTGGATCAGACGGTGGTTCCTATTCTCCTGCAGGGCTTGTTCGGTT
ZK0989b     CCCACACGAGCGTACCTGGATCAGACGGT-----GGGCTTGTTCGGTT
*****
```

```
WT          CTGGCCAAGGAAAGGTC
ZK0989b     CTGGCCAAGGAAAGGTC
*****
```