

## ZK058

Target Position 1: exon 3

Sense Strand Sequence

ttgcttgcttctccataggaaggccgagaacaatatgagctggcagccacctcagagcaggggggcaagaagtcaaagt  
ccaagggcaagaagagaaggataaagacatggatgaactcaaaaaagaagtgacttggtgagttatgagca  
taaactataatggctatcgtactttgataggatggtaaaatgctgttttattacatctttgtagGACGATCACAAA  
CTGTCCCTGGATGAGCTCACCAGGAAATATAACACTGATTTGACAAGGgtaagactgtattggatga  
acagctttggaatgtaagtctcagtttgat

Target Position 2: exon 2

Sense Strand Sequence

cagaacaagttgagcaatgccagaatttggtacattattgtgcaaattaatgctgtaaacatgcttttaggacatattat  
agtgtataccttgacaacagatttaattgtagttttgctgcttctccatagGAAGGCCGAGAACAATATGAGC  
TGGCAGCCA CCTCAGAGCAGGGGGCAAGAAGTCAAAGTCCAAGGGCAAGAAAGAGAAG  
GATAAAGACATGGATGAACTCAAAAAGAAGTGGACTTGgtgagttatgagcataaatcctataa  
tggtatcgtactttgataggatggtaaaatgctgttttattacatctttgtagGACGATCACAAACTGTCCCTG  
GATGAGCTC

Uppercase: Exon/coding sequence

Lowercase: intron/noncoding sequence

atcg : Forward/Reverse primer

atcg : cas9 target site

### ZK058a: 10bp deletion

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

```
WT          tacatctttgtagGACGATCACAAACTGTCCCTGGATGAGCTCACCAGGAAATATAACAC
ZK058a      tacatctttgtagGACGATCACAAAC-----TGAGCTCACCAGGAAATATAACAC
            *****                               *****
```

### ZK058b: 26bp deletion

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

```
WT          GCCGAGAACAATATGAGCTGGCAGCCACCTCAGAGCAGGGGGGCAAGAAGTCAAAGTCCA
ZK058b      GCCGAGAACAATATGAGCTGGC-----AGTCAAAGTCCA
            *****                               *****
```

```
WT          AGGGCAAGAAAGAGAAGGATAAAGACATGGATGAACTCAAAAAG
ZK058b      AGGGCAAGAAAGAGAAGGATAAAGACGTGGATGAACTCAAAAAG
            *****.*****
```