

ZK0355

Upstream target Position: 5'-UTR(before exon1)

Sense Strand Sequence

tgacgaaatcatcaaaagccatagataacctaatgacaaattgatgtgaatcgataatacagaaatctcacctcatg
tcacccgtgcgggttcacgcgcttccgtcgcgcacatgaagcacacagcagctcgcgcgcatcccgcgctctgattggttt
aaggataacaatgatgtgctgatctgagatctgctgacaatgccatgggtggttacccatccgaggattcctctgtgtgtag
gtgtggtggtcttttattattatattttaaaacatttcttaaaatatttacagactgatggagatcacatgacaacatacattg
aagagacaacatggcgcgctttagattattaaagaggctaacataacataaaatgtaatgaatgaagtctaaattgtag
acatttgacacctttttcgggttttttaaactttgtaacaaagacaaaccctgtagtaattaacaattaacc

Downstream target Position: exon3

Sense Strand Sequence

cgacaagaacaagctgaagaagaccgtaactcatgagaaaaacactcttcccaccaagagagtaagtagagcttcat
ggaataatcctactttcttatttcagctaattttgttctcccaaatgccatctgtctagCCATTGAGCAGGAGAAG
AAATGTGAGACTTAAATTAGCCATGTTGGATCTTCACCAAGGACTGAATTGCAGATCATGTGA
CTTTTTAAAAAGATGGCTCTTCTACCACCAgTTACTATGGCCATGCAGGCtGAAGTTGGAAAT
TGACCCATGTGTTATCAGATGATATCGACGATTCTGATAAAAAAAAAAATGCTGTAAAATCATGG
ATATTTAACTTTGTATAACTGTCTGATCTGCTCTCATTGACCTTTGGTGAAATAAACCTTTGAA
ATGAAttcctgtgtgtgggttcattaagaacggtggaaaaataaatatgtttgagctttgctatttgacaa

Uppercase: Exon/coding sequence

Lowercase: intron/noncoding sequence

atcg : Forward/Reverse primer

atcg : cas9 target site

ZK0355a: 832bp deletion,6bp insertion

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

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WT          GGTTTAAGGATAACAATGATGTGCTGATCTGAGATCTGCTGACAATGCCATGGGTGGTTA
ZK0355a     GGTTTAAGGATAACAATGATGTGCTGATCTGAGATCTGCTGACAATA-----
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WT          CCCATCCGAGGATTCCTCTGTGTGTAGGTGTGGTGGTCTTTTATTATTATATTTAAAAAC
ZK0355a     -----

WT          ATTTCTTAAATATTTACAGACTGATGGAGATCACATGACAACATACATTGAAGAGACAA
ZK0355a     -----

WT          CATGGCGCCGTTGTAGATTATTTAAAGAGGTCTAACATAACATAAAATGTAATGAATGAAG
ZK0355a     -----
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WT TCTAAATTGTAGACATTTGCACCTCTTTTTCGGGTTTTATTTAAACTTTGTAACAAAGAC
ZK0355a -----

WT AAACCCTGTTAGTCAATTAACAATTAACCAATTAATGTAATGGAACAAATGCTAAACAA
ZK0355a -----

WT GACGCACCTGGAATGTTAATTAGATTACACCTCAGCCATCTGCCAGCATTGCATGGCATA
ZK0355a -----

WT TATAAGTGTAAGTCAGAAGCTTGTGTCAGTGTCTTATCCCTCATCTGTTGCGCTTCA
ZK0355a -----

WT GGCTTAAGTAAGTTGTGTTACTAAGTTTGGTTATGTGTTGCATTTTTAGTGAGCTGTTTT
ZK0355a -----

WT AATTTATTTTATTCACATCCTCCTAGAGAAGCTAAAGCAAAACAATGTCTGACAAACCTG
ZK0355a -----

WT ATGTCAGTGAGGTTTCTCATTTCGACAAGAACAAGCTGAAGAAGACCGTAACTCATGAGA
ZK0355a -----

WT AAAACACTCTTCCCACCAAAGAGAGTAAGTATGAGCTTCATGGAATAATCCTACTTTCTT
ZK0355a -----

WT ATTTTCAGCTAATTTTTGTTTCTCCCAAATGCCATCTGTCTAGCCATTGAGCAGGAGAAG
ZK0355a -----

WT AAATGTGAGACTTAAATTAGCCATGTTGGATCTTCACCAAGGACTGAATTGCAGATCATG
ZK0355a -----

WT TGACTTTTAAAAAGATGGCTCTTCTACCACCAGTACTATGGCCATGCAGGCTGAAGT
ZK0355a -----ACTATCTATGGCCATGCAGGCTGAAGT
* * *****

WT TGGAAATTGACCCATGTGTTATCA
ZK0355a TGGAAATTGACCCATGTGTTATCA
