

# Antisense transcript to grn1 and grn2 (5'- 3')

exon  
1

ATCGATTTAACGCATTTTAACTTGTTCGAGCGT TTCCCTTCAGGGACGCATTTTGCAAATT  
TATGAAGGTAATTCTTCGTTTAAAGTCGTATACCAGCGGATACAGTATGTG

tggctctgccatac**CTGATCTTTCTGGAAGGTTCTGGTGGCC TTCTGGAAGGACGATGG**

**CAGAGTCAGCCA GCCCCGCAGGCATCGGGTGGAGGTGGAATCG CAGCGATATCCATGTTG**

**ACAACAGTGAATCCCA TCCCTGCAACACTGACC**ctgaagcaga gaagagagtgaacaaag

gttaaccctgtaactatgagtagaaacatatta actcgagattctgttac**CATTGAGTAA**

exon  
2

**GGACAACATGACCATATGCCATATGGACTCAGACAGCATGTTG TTCCGTCTGGACACACA**

**GTTTGAGCATCGCAGTAAATCACA GAGGCAGAGGTGTCTACAGTCTCCACCGGGATAGAC**

**AGATCAAGCAGAGGCTCATCTGCAGCCACCAGAGCCGCCATGAGTAACATCAACACTGGG**

**AACAT**ctgaaaatgtgaaataggagagattag tggctctgccatac**CTGATCTTTCTCG**

**AAGGTTCTGGTGGCCTCCTGGAAGGACGATGGCAGTGACAGCCAGCCTCGCAGGCATCGG**

**GTGGAGGCGAAATTGCACGATAACCGTGTGCAGCAGTGAATCCCATCCCTGCAACACT**

**GACC** ctgaagcagaggagagagtgagcaaaggttaaccctgtaactatgagtagaagaat

ataaaaaacaagattctcttac**CATTGGGAATGGACAACATGTCCATTTGCCATATGGAG**

exon  
3

**TCCGACAGCATGTTGTTCTATCTGGACACACAGTTCGAGCATCGCAGTGAATCACAGAGG**

**CAGAGACGTCTTCAGTCTCCATCGGAATGGACAGATCCAGCA GAGGCTCATCTGCAGCCA**

**CCAGAGCCGCCATGAGTAACATCAACACTGGGAACAT**ctgaaaatgtgaaataggagaat

ATTAG TATCTCCCAAGCTCTATCAGGTTGGATGGGCAGCGACGATGTACAACCATTT

TCAGATCTCCAGAGATGTTTAAATAGGATTTAGGTGTGGCGGTGTGCTTTGGGTCATTG

TCCTGCTGTAAGATGCCCCAGTCTGAGGTCAAGAGCACTCTGAAGCAGGTTTTTCATTTCAG

GATGTCTCTGTACATTGCTGCATTCATCTTTCCCTCTATCCTGACTAGTCTTCTAGTTCC

TGCTGCTGAAAAACATCCCCACACCACCATGCTTCACTGTAGGGGTGGGATTAGCCTTAT

GATAAGCGGTGTCTGGTTTTTCTATAAACGTAACACCTGGTGTTC ACTCCAAGAGTTCCAT

TTTAGTCTCATTAGACCCGAATTTTGTCTTATGGTCTGAGAGTCCTTCAGATGGGTTA

GTCCTAAAATCCAGGCGGGCCTCTACACCTAACACGCCTGAATGCTGGAGCTCAGACAGA

TTGACCAATTGGGTAATTGATCACCCCCCTGACTAAGGCCCTTC TCCCCGATCACTCAGC

exon  
4

TTAGATGGCCAGCCAGCTCTAGGAAGAGTCCTGGTGGTTCCAAACATCTTCCACTTATCG

ATGATGGAGGCCACTGTGCTCACTGGAACCTTCAGAGCAGCAGAAATCTTTCTGTAACCT

TCCACAGTCTTGTGGCTCAAGACAATCCTGCCTCGGAGGTCTACAGACAATTCCTTTGTC

TTCATGCTTGGTTTTGTGCTTTGACATGCACTGTCAACCCTGGGACCCTATATAGACAGGT

GTATGCTTTTTCAAATCATGTCCAATTAAGTGAATTTACCACAGGTGAACTCCAATTAAG

CTGCTGAAACATCTCAAGAATGATCAGTGGAAACAGAATGTACCTGAGCTCCATTTAGAG

CTTCGCGCAAAGGCTGTGAATACTGATGAACATCTGATTTTTTCAGGTTTTCTATTTAT**AA**

**TAAATTTGCAACAATTTCAAAAAAAAAAAAAAAAAAAAA**

**TAAATTTGCAACAATTTCAAAAAAAAAAAAAAAAAAAAA**

Reverse complement  
of genomic region  
encompassing  
exons 2 and 3 of **grn1**

Reverse complement  
of genomic region  
encompassing  
exons 2 and 3 of **grn2**

Reverse complement  
of a tzf transposase gene