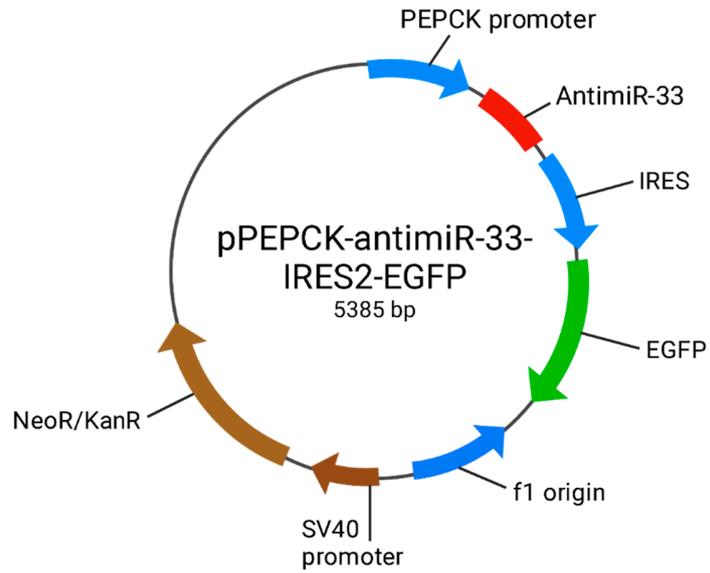
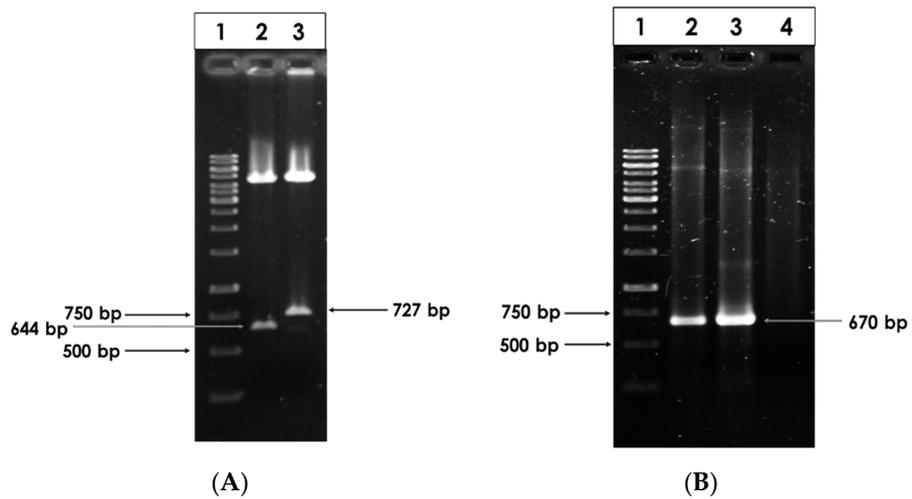
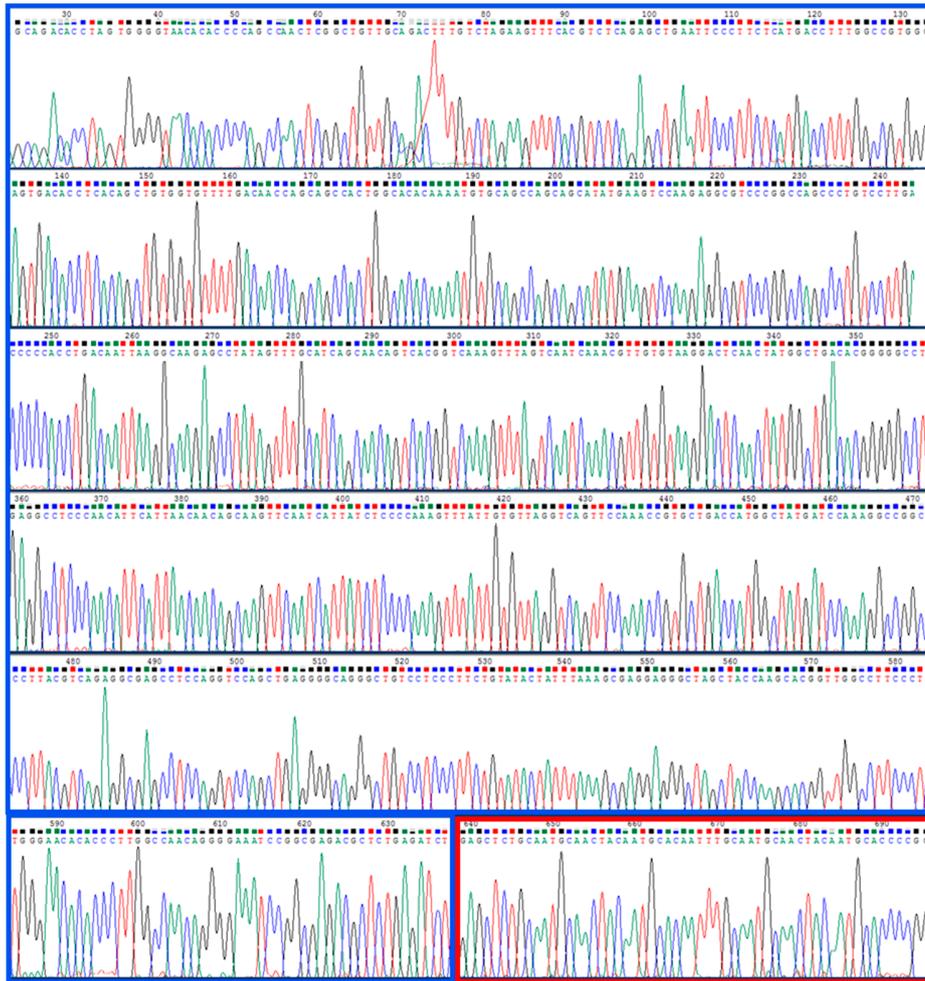


## SUPPLEMENTARY MATERIALS



**Figure S1.** Design and *in silico* construction of recombinant plasmid pPEPCK-antimiR-33-IRES2-EGFP. The recombinant plasmid contains the antimiR-33 sponge and the EGFP reporter gene, under the transcriptional control of PEPCK promoter. Created with BioRender.com.





(C)

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#####
#
# Aligned_sequences: 2
# 1: secuenciación
# 2: pPEPCK-antimiR-33
# Matrix: EDNAFULL
# Gap_penalty: 10.0
# Extend_penalty: 0.5
#
# Length: 762
# Identity: 762/762 (100.0%)
# Similarity: 762/762 (100.0%)
# Gaps: 0/762 ( 0.0%)
# Score: 3810.0
#
#####
Secuenciación 1 CCAGCAGACACCTAGTGGGGTAACACACCCAGCCCAACTCGGCTGTTGCA 50
pPEPCK-antimi 64 CCAGCAGACACCTAGTGGGGTAACACACCCAGCCCAACTCGGCTGTTGCA 113
Secuenciación 51 GACTTTGTCTAGAAGTTTCACGTCTCAGAGCTGAATCCCTTCTCATGAC 100
pPEPCK-antimi 114 GACTTTGTCTAGAAGTTTCACGTCTCAGAGCTGAATCCCTTCTCATGAC 163
Secuenciación 101 CTTTGGCCGTGGGAGTGACACCTCAGAGCTGTGGTGTTTGACAACACGC 150
pPEPCK-antimi 164 CTTTGGCCGTGGGAGTGACACCTCAGAGCTGTGGTGTTTGACAACACGC 213
Secuenciación 151 AGCCTAGGACACAAAATGTGACGCCAGCAGCATATGAAGTCCAAGAGG 200
pPEPCK-antimi 214 AGCCTAGGACACAAAATGTGACGCCAGCAGCATATGAAGTCCAAGAGG 263
Secuenciación 201 CGTCCCGCCAGCCCTGTCTTGACCCACCTGACAATTAAGGCAAGAG 250
pPEPCK-antimi 264 CGTCCCGCCAGCCCTGTCTTGACCCACCTGACAATTAAGGCAAGAG 313
Secuenciación 251 CCTATAGTTTGCATCAGCAACAGTCAAGTTAGTCAATCAAAAC 300
pPEPCK-antimi 314 CCTATAGTTTGCATCAGCAACAGTCAAGTTAGTCAATCAAAAC 363
Secuenciación 351 CATTCAATTAACAACAGCAAGTTCAATCATTATCTCCCAAGTTTATTGT 400
pPEPCK-antimi 414 CATTCAATTAACAACAGCAAGTTCAATCATTATCTCCCAAGTTTATTGT 463
Secuenciación 401 GTTAGGTCAGTTCCAAACCGTGCTGACCATGGCTATGATCAAAGGCCGG 450
pPEPCK-antimi 464 GTTAGGTCAGTTCCAAACCGTGCTGACCATGGCTATGATCAAAGGCCGG 513
Secuenciación 451 CCCCTTACGTCAGAGGCGAGCCTCCAGGTCAGCTGAGGGCAGGGCTGT 500
pPEPCK-antimi 514 CCCCTTACGTCAGAGGCGAGCCTCCAGGTCAGCTGAGGGCAGGGCTGT 563
Secuenciación 501 CCTCCCTTCTGTACTATTTAAAGCGAGGAGGGCTAGCTACCAAGCACG 550
pPEPCK-antimi 564 CCTCCCTTCTGTACTATTTAAAGCGAGGAGGGCTAGCTACCAAGCACG 613
Secuenciación 551 GTTGGCCTTCCCTCTGGGAACACACCCCTTGGCCAACAGGGGAAATCCGGC 600
pPEPCK-antimi 614 GTTGGCCTTCCCTCTGGGAACACACCCCTTGGCCAACAGGGGAAATCCGGC 663
Secuenciación 601 GAGACGCTCTGAGATCT GAGCTCTGCAATGCAACTACAATGACAAATTT 650
pPEPCK-antimi 664 GAGACGCTCTGAGATCT CGAGCTCTGCAATGCAACTACAATGACAAATTT 713
Secuenciación 651 GCAATGCAACTACAATGACACCCGGG TCCGCCCTCTCCCTCCCCCCCC 700
pPEPCK-antimi 714 GCAATGCAACTACAATGACACCCGGG ATCCGCCCTCTCCCTCCCCCCCC 763

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(D)

**Figure S2. Characterization of recombinant plasmid pPEPCK-antimiR-33-IRES2-EGFP.** (A) Electropherogram showing enzyme restriction with AseI and XmaI of the recombinant and control plasmid, 1. 1 Kb molecular size marker, 2. Parent plasmid pIRES2-EGFP (644 bp = CMV promoter and part of the MCS), and 3. Recombinant plasmid pPEPCK-antimiR33-IRES2-EGFP (727 bp = PEPCK promoter and antimiR-33 sponge); (B) Electropherogram showing the PEPCK promoter obtained by PCR, 1. 1 Kb molecular size marker, 2. Positive control of the PEPCK promoter, 3. Amplification of the PEPCK promoter from the recombinant plasmid pPEPCK-antimiR-33-IRES2-EGFP, and 4. Negative control of PCR reaction; (C) PEPCK promoter sequence and antimiR-33 sponge in the recombinant plasmid pPEPCK-antimiR-33-IRES2-EGFP, PEPCK promoter in blue and antimiR-33 sponge in red; (D) comparison of the designed plasmid pPEPCK-antimiR-33-IRES2-EGFP to the nucleotide sequence obtained by sequencing, PEPCK promoter (Blue square) and antimiR-33 sponge (Red square).