**Supplementary document 1:**

**(1)The map of the constructed PET32a-Que-0.1 expression vector and nucleic acid sequence.**

**(2)Analysis and validation of original transcript sequence of the Que-0.1 gene.**

**(1)The map of the constructed PET32a-Que-0.1 expression vector and nucleic acid sequence.**



Figure 1.The map of the constructed PET32a-Que-0.1 expression vector.

>PET32a-Que-0.1.dna (6010 bp)

atccggatatagttcctcctttcagcaaaaaacccctcaagacccgtttagaggccccaaggggttatgctagttattgctcagcggtggcagcagccaactcagcttcctttcgggctttgttagcagccggatctcagtggtggtggtggtggtgctcgagttattagcaagagtgagcagagttgcaagagttgtagcaaacagccagcgggtcttcaacgtcagaaccggtgtcgatctggcagtcaacaacgcagtccatgtaagaagcgcagcagtcgttaccgtcagcagagtcgcaaccagaggtgtcgatgtttttgcacggggtagcgcagtcagagtcctgagagatcaggcagtcacggtcacgcaggcattcgtaggttttcatagcgcagcaagacttgtcgtcgtcgtcggtaccagaagaatgatgatgatgatggtgcatatggccagaaccagaaccggccaggttagcgtcgaggaactctttcaactgacctttagacagtgcacccactttggttgccgccacttcaccgtttttgaac

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**(2)Analysis and validation of original transcript sequence of the Que-0.1 gene.**

The open reading frame(ORF) of mature peptide were underlined.

**A**.The nucleic acid sequence of the Que-0.1 gene.

*ATGAGCGATAAAATTATTCACCTGACTGACGACAGTTTTGACACGGATGTACTCAAAGCGGACGGGGCGATCCTCGTCGATTTCTGGGCAGAGTGGTGCGGTCCGTGCAAAATGATCGCCCCGATTCTGGATGAAATCGCTGACGAATATCAGGGCAAACTGACCGTTGCAAAACTGAACATCGATCAAAACCCTGGCACTGCGCCGAAATATGGCATCCGTGGTATCCCGACTCTGCTGCTGTTCAAAAACGGTGAAGTGGCGGCAACCAAAGTGGGTGCACTGTCTAAAGGTCAGTTGAAAGAGTTCCTCGACGCTAACCTGGCC*GGTTCTGGTTCTGGCCATATGCACCATCATCATCATCAT*TCTTCTGGTACCGACGACGACGACAAG****TCTTGCTGCGCTATGAAAACCTACGAATGCCTGCGTGACCGTGACTGCCTGATCTCTCAGGACTCTGACTGCGCTACCCCGTGCAAAAACATCGACACCTCTGGTTGCGACTCTGCTGACGGTAACGACTGCTGCGCTTCTTACATGGACTGCGTTGTTGACTGCCAGATCGACACCGGTTCTGACGTTGAAGACCCGCTGGCTGTTTGCTACAACTCTTGCAACTCTGCTCACTCTTGC***

**B**.Translation of the Que-0.1 gene.

*MSDKIIHLTDDSFDTDVLKADGAILVDFWAEWCGPCKMIAPILDEIADEYQGKLTVAKLNIDQNPGTAPKYGIRGIPTLLLFKNGEVAATKVGALSKGQLKEFLDANLAG*SGSGHMHHHHHHSSGTDDDDK***SCCAMKTYECLRDRDCLISQDSDCATPCKNIDTSGCDSADGNDCCASYMDCVVDCQIDTGSDVEDPLAVCYNSCNSAHSC***

**C**.Fluorescent peaks in the mature peptide area of the Que-0.1 gene following Sanger sequencing.







Fluorescent peaks are viewed using Unipro UGENE v1.26.1. PCR for Sanger sequencing was performed on an Applied BioSystems 3730xl DNA Analyzer (Applied Biosystems, Carlsbad, CA, USA).