## Supplementary Table 1 List of primers used for vector construction

| Primer name | Primer sequence (5’-3’) |
|-------------|-------------------------|
| P1          | ATGTTCTCTGGACGGTTTGG    |
| P2          | TCCAACGTGGAAGTCGAGACAGCCTGGCCACATCAAAGTGGT |
| P3          | CACCACTTGATGTGCGGAGTGTCTTGCTGACCTCCACGGTT |
| P4          | GTGCCCTCAAAAGTATTGTTCAGGTCAACATCCACGGACGC |
| P5          | TGCTGTGGAGTTGGGACACCTGCAAAATTACTTGGAGGAACCA |
| P6          | CGAGGACATCCATAGGTTGACGTACATCCAAACTATAACCCT |
| P7          | GACGTTATAGCGTTGAACTGTACACCTATGGATGTCCTC |
| P8          | TAGCAGACACTCGAATTGCG |
| P9          | AGTGGGCCCAGACGACACCACCTTGGATG |
| P10         | TTAATGATGATGATGATGATGATGATGCTGCTGCTAGCAGACAC |
| P11         | CAGAGATTGTGAAGTATGATGATGATGATGGGCT | TGAATGGC |
| P12         | ACTGGTACCCGGAGAATGATGAGCTTACCT |
| P13         | CTCAGGGCGAGTAGAGATCGGAACGATCCATGGTGGGTGCTCAGGG |
| P14         | GAGGCCCCTGGCAAACTCGTGCAGACAGCCGAGGCTCAGGG |
| P15         | AAAAGCAGTCCAAACCGCCGGAGAAGAATCCATGGTGGGCGG |
| P16         | CATGGGCCCAGCACTCAGCGAGCGCCGAGGCGCTGCAAAA |
| P17         | CCGAGATGACGGCCACTCTGGGTGACTTTCCAGTACTTCCTCAAGGGG |
| P18         | AGATGACGGCCACCTT |

* The bold and italic parts are the restriction enzyme sites.
| Primer name | Primer sequence (5’-3’) |
|-------------|-------------------------|
| P19 Ident-hyg-F | CTATTTCTTTGCCCTCGGAC |
| P20 Ident-hyg-R | ATGAAAAAGCCTGAACCTCACC |
| P21 gpdA-F | GCAGGTACCAGGAGATATGGAGCTTC |
| P8 4ANL-R | TAGCAGACACTCTGAAATTTC |

| Signal name | The signal sequences |
|-------------|----------------------|
| 1 glaA signal | GCCACCATGGAGTTCTGGATCTCTACTCGAGCGGCTCTCGGCA |
| 2 ANL signal | GCCACCATGGAGTTCTGGATCTCTACTCGAGCGGCTCTCGGCA |
| 3 cbh I signal | GCCACCATGGAGTTCTGGATCTCTACTCGAGCGGCTCTCGGCA |

* The bold parts are the kozak sequence. The underlined two nucleotides in each signal sequence were added downstream of the kozak sequence G+4 to avoid frameshift.