

Table S1A. Plasmids used in the study.

| Description                       | Plasmid | PCR Template  | PCR primer  | Cloning site       | Vector |
|-----------------------------------|---------|---|---|--------------------|--------|
| WT (CPC1-LUC)                     | pPC100  | pPC01   | BGLIIS, SACIA, SACIS, PSTIA                             | <i>BglII/PstI</i>  | pPC01  |
| UAA                               | pPC102  | pPC100  | SACIS; UAA  | <i>SacI/XhoI</i>   | pPC100 |
| $\Delta$ uORF1_UAA                | pPC187  | pPC182  | BamHI/S <i>BglII/A</i>                                  | <i>BamHI/BglII</i> | pPC102 |
| $\Delta$ uORF2_UAA                | pPC113  | pPC100  | AUG/ACA; UAA  | <i>SacI/XhoI</i>   | pPC100 |
| $\Delta$ uORF1_uORF2_UAA          | pPC188  | pPC182  | BamHI/S <i>BglII/A</i>                                  | <i>BamHI/BglII</i> | pPC113 |
| $\Delta$ uORF2                    | pPC104  | pPC100  | AUG/ACA; PSTIA  | <i>SacI/PstI</i>   | pPC100 |
| $\Delta$ mAUG                     | pPC101  | pPC100  | SACIS; mAUG/ACA   | <i>SacI/XhoI</i>   | pPC100 |
| $\Delta$ mAUG_UAA                 | pPC176  | AgeI/XhoI_UAA_mORF/S AgeI/XhoI_UAA_mORF/A   |   | <i>AgeI/XhoI</i>   | pPC100 |
| $\Delta$ 8                        | pPC103  | pPC100  | ACG/ACA; PSTIA  | <i>SacI/PstI</i>   | pPC100 |
| $\Delta$ 5_UAA                    | pPC175  | pPC102  | Ppc1/S AUU1UUU/A AUU1UUU/S SACIA                        | <i>BamHI/BglII</i> | pPC102 |
| $\Delta$ 6_UAA                    | pPC117  | pPC100  | CUG/CUC; UAA  | <i>BglII/XhoI</i>  | pPC100 |
| $\Delta$ 7_UAA                    | pPC116  | pPC100  | BGLIIS; AUU/UUU   | <i>BglII/SacI</i>  | pPC102 |
| $\Delta$ 8_UAA                    | pPC114  | pPC100  | ACG/ACA; UAA  | <i>SacI/XhoI</i>   | pPC100 |
| 8AUG_UAA                          | pPC115  | pPC100  | ACG/ATG; UAA  | <i>SacI/XhoI</i>   | pPC100 |
| $\Delta$ uORF1_ $\Delta$ 5_UAA    | pPC179  | pPC175  | BamHI/S uORF1/A uORF1/S <i>BglII/A</i>                  | <i>BamHI/BglII</i> | pPC102 |
| $\Delta$ uORF1_ $\Delta$ 6_UAA    | pPC180  | pPC102  | BamHI/S uORF1/A uORF1/S <i>BglII/A</i>                  | <i>BamHI/BglII</i> | pPC117 |
| $\Delta$ uORF1_ $\Delta$ 7_UAA    | pPC181  | pPC102  | BamHI/S uORF1/A uORF1/S <i>BglII/A</i>                  | <i>BamHI/BglII</i> | pPC116 |
| $\Delta$ uORF1_ $\Delta$ 8_UAA    | pPC182  | pPC102  | BamHI/S uORF1/A uORF1/S <i>BglII/A</i>                  | <i>BamHI/BglII</i> | pPC114 |
| $\Delta$ uORF1_8_UAA              | pPC183  | pPC102  | BamHI/S uORF1/A uORF1/S <i>BglII/A</i>                  | <i>BamHI/BglII</i> | pPC115 |
| $\Delta$ uORF1_ $\Delta$ 5678_UAA | pPC184  | pPC114  | CTG/CTC_ATT2/TTT/S <i>XhoI/A</i>                        | <i>BglII/XhoI</i>  | pPC179 |
| $\Delta$ uORF1_ $\Delta$ 5678     | pPC185  | pPC103  | CTG/CTC_ATT2/TTT/S <i>XhoI/A</i>                        | <i>BglII/XhoI</i>  | pPC179 |
| $\Delta$ 5678                     | pPC186  | pPC103  | CTG/CTC_ATT2/TTT/S <i>XhoI/A</i>                        | <i>BglII/XhoI</i>  | pPC175 |
| In vivo WT                        | pJI500  | pPC100  |   | <i>BamHI/NsiI</i>  | pJI401 |
| In vivo UAA                       | pJI502  | pPC102  |   | <i>BamHI/NsiI</i>  | pJI401 |
| In vivo $\Delta$ mAUG             | pJI501  | pPC101  |   | <i>BamHI/NsiI</i>  | pJI401 |
| In vivo $\Delta$ mAUG_UAA         | pJI576  | pPC176  |   | <i>BamHI/NsiI</i>  | pJI401 |
| Vector                            | pJI401  | pJI304<br>(wei,2013)  | BamHI_LUC/S <i>BstBI/A</i> <i>BstBI/S</i> <i>NsiI/A</i> | <i>BamHI/NsiI</i>  | pJI400 |
| Vector                            | pJI400  | Remove <i>BstBI</i> site in pJI304 by <i>BstBI</i> digestion, followed by end-repaire and self-ligation |   |                    |        |

Table S1B. Primers used in the study.

| Oligo                | Sequence (5' – 3')  |
|----------------------|---|
| BGLIIS               | CCCTTCAGCTCTTCCTTCACAGGT  |
| SACIS                | GCCAAGACTTTCCAGAGCTCACCACGGATTCCC   |
| SACIA                | GGGAATCCGTGGTGAGCTCTGGAAAGTCTTGGC   |
| PSTIA                | GCCTGGATAATGTTTGCAACTCGCTG  |
| ACG/ACA              | TCCAGAGCTCACCACAGATTCCCAAC  |
| AUG/ACA              | TCCAGAGCTCACCACGGATTCCCAACAGTCAACACAGCTTCCCTCC  |
| mAUG/ACA             | GTGACTCGAGTGAATGTCTTGTTGCCCT  |
| UAA                  | GTGACTCGAGTGAACATCTTGTTGCCTTACTTTCCGTGCG  |
| ACG/ATG              | TCCAGAGCTCACCATGGATTCCCAAC  |
| CUG/CUC              | GGTAGATCTCAACTTCAGCACCCAG   |
| AUU/UUU              | GGTGAGCTCTGGAAAGTCTTGGCCGTGAAAGGTGGCGG  |
| BamHI/S              | TATAGATCGGATCCTTCCTTTCTCTTCTCTG   |
| BglII/A              | GAAGTTCAGATCTACCTGTGAAGGAAGAG   |
| uORF1/S              | ATCCATCAAGATGCGTTAAATCGCTCCCA   |
| uORF1/A              | TGGGAGCGATTTAACGCATCTTGATGGATGCTTC  |
| CTG/CTC_ATT2/TTI/S   | ACAGGTAGATCTGAACTTCAGCACCCAGCTTCGTAGCTCGCGCTCAAG<br>TTCTCTTACCCCCACCGCCACCATTCACGGCCA |
| XhoI/A               | TCGAGTGAACATCTTGTTGCCCTGCTTTCCGTGCGAAATACTA   |
| AgeI/XhoI_UAA_mORF/S | CCGGTAGTATTTGCGCACGGAAAGTAAGGCAACAAGACATTCAC  |
| AgeI/XhoI_UAA_mORF/A | TCGAGTGAATGTCTTGTTGCCTTACTTTCCGTGCGAAATACTA   |
| BamHI_LUC/S          | AACTAGTGGATCCTAAGCCACCAT  |
| BstBI/S              | CGAGTACTTCGAAATGTCCGTCC   |
| BstBI/A              | GGACGGACATTTCAAGTACTCG  |
| NsiI/A               | AATGATAATGCATTGTCAGCTGTACAGTATTTAC  |
| PpcI/S               | GGTGCATGCTAATACGACTCACTATAG   |
| AUU1UUU/S            | AATCGTCAACTTTAAACAATTTTACGTTC   |
| AUU1UUU/A            | AAATTGTTTAAAGTTGACGATTACCGAAC   |
| SACIA                | GGGAATCCGTGGTGAGCTCTGGAAAGTCTTGGC   |
| CPC101               | TCCTGAAGTGGTGGCTGTT   |