SUPPLEMENTARY MATERIALS
to the article by D.N. Antropov, O.V. Markov, A.S. Dome, P.A. Puchkov, E.V. Shmendel, D.V. Gladkikh, V.M. Golyshev, A.M. Matveeva, M.A. Maslov, G.A. Stepanov
"A new combination of 5'- and 3'-untranslated regions increases the expression of mRNAs *in vitro* and *in vivo*"

Table S1. The sequences of the UTRs used in the research

Sequence name	Sequence (5'→3')
5'-UTR of β-globin	GGACATTTGCTTCTGACACAACTGTGTTCACTAGCAA CCTCAAACAGACACC
3'-UTR of β-globin	GGCTCGCTTTCTTGCTGTCCAATTTCTATTAAAGGTTCC TTTGTTCCCTAAGTCCAACTACTAAACTGGGGGATATT ATGAAGGGCCTTGAGCATCTGGATTCTGCCTAATAAAA AACATTTATTTTCATTGC
5'-UTR-4	CTGAAACACGGTGGAGAGTTTATTGCAAAATAACGC GTCCATTCGACACC
AES-mtRNR1 (3'-UTR)	CTGGTACTGCATGCACGCAATGCTAGCTGCCCCTTTC CCGTCCTGGGTACCCCGAGTCTCCCCCGACCTCGGGT CCCAGGTATGCTCCCACCTCCACCTGCCCCACTCACC ACCTCTGCTAGTTCCAGACACCTCCCAAGCACGCAGC AATGCAGCTCAAAACGCTTAGCCTAGCCACACCCCCA CGGGAAACAGCAGTGATTAACCTTTAGCAATAAACGA AAGTTTAACTAAGCTATACTAACCCCAGGGTTGGTCAA TTTCGTGCCAGCCACACC

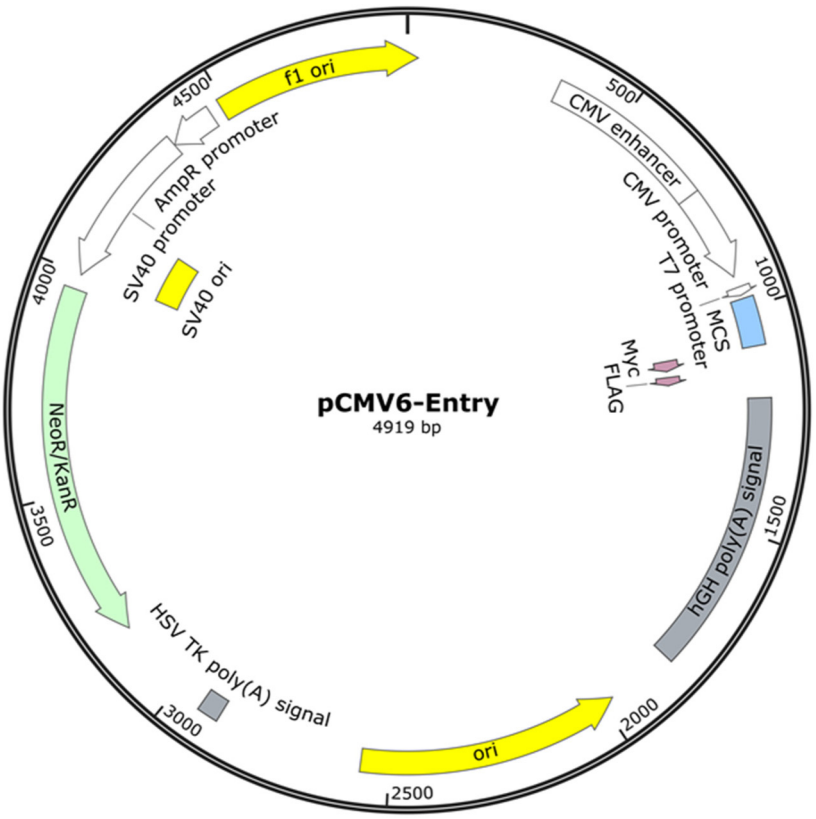

Fig. S1. The map of the pCMV6-Entry plasmid.

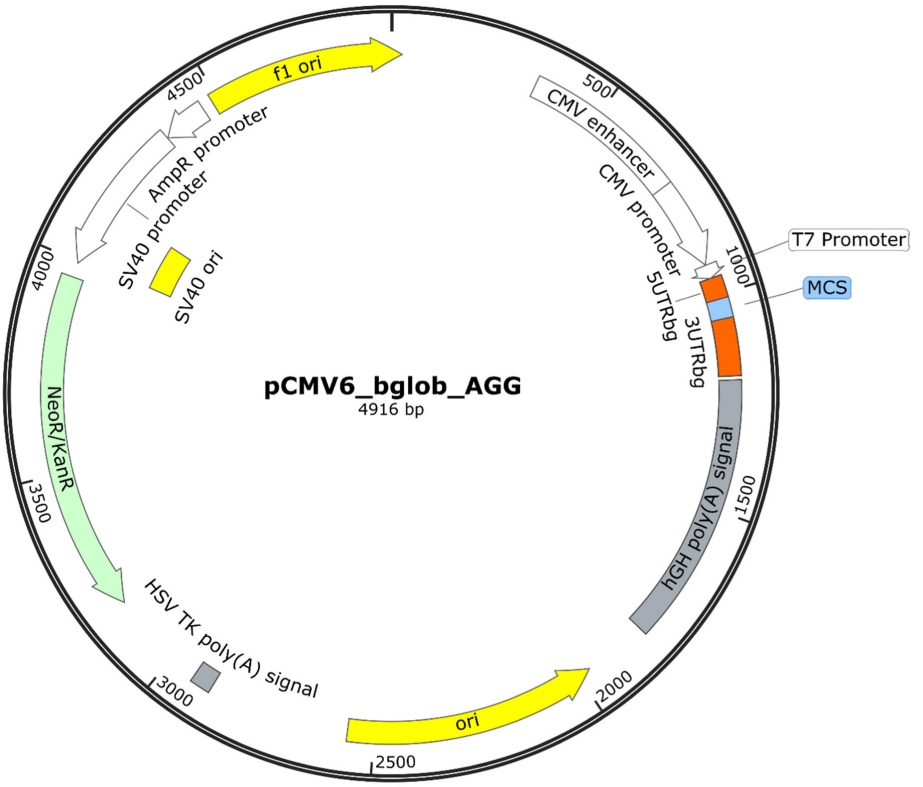

Fig. S2. The map of the pCMV6_T7_bglob_AGG plasmid, containing the sequences of 5′- and 3′-UTRs of β-globin.

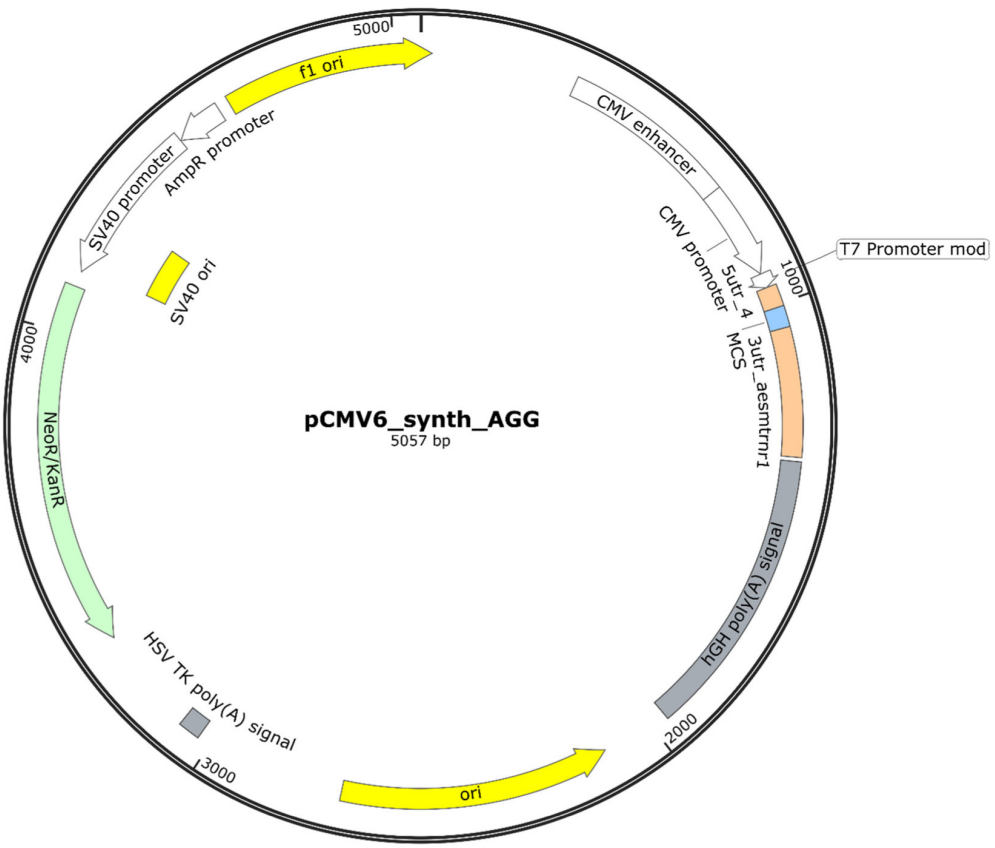

Fig. S3. The map of the pCMV6_T7_synth_AGG plasmid, containing the sequences of 5′-UTR-4 and 3′-UTR AES-mtRNR1 (“synthetic” UTRs).

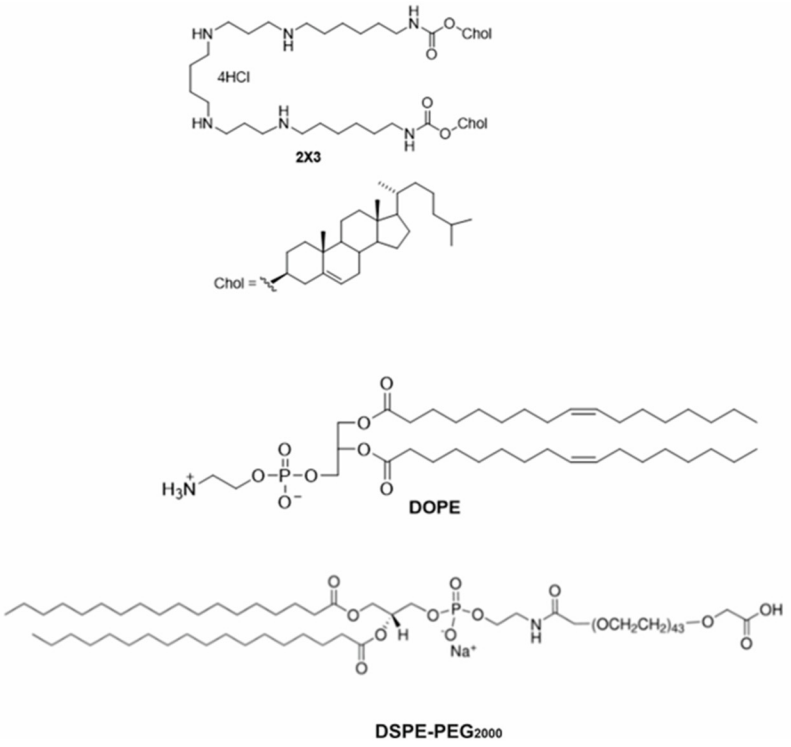

Fig. S4. Structures of the lipid components of cationic liposomes used for mRNA delivery in this study.

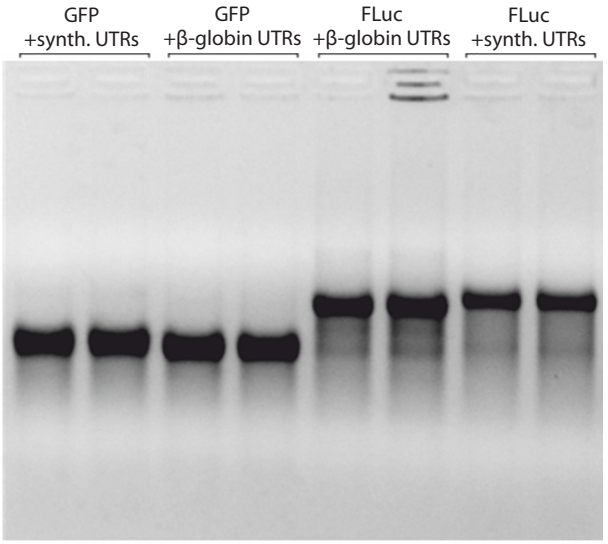

Fig. S5. Electrophoretic analysis of GFP mRNA containing synthetic UTRs (1,214 nt), GFP mRNA containing β-globin UTRs (1,073 nt), FLuc mRNA containing synthetic UTRs (2,214 nt), and Luc2 mRNA containing β-globin UTRs (2,073 nt) in a 1.5 % agarose gel. The adjacent ladders of each mRNA specified are the technical repeats.

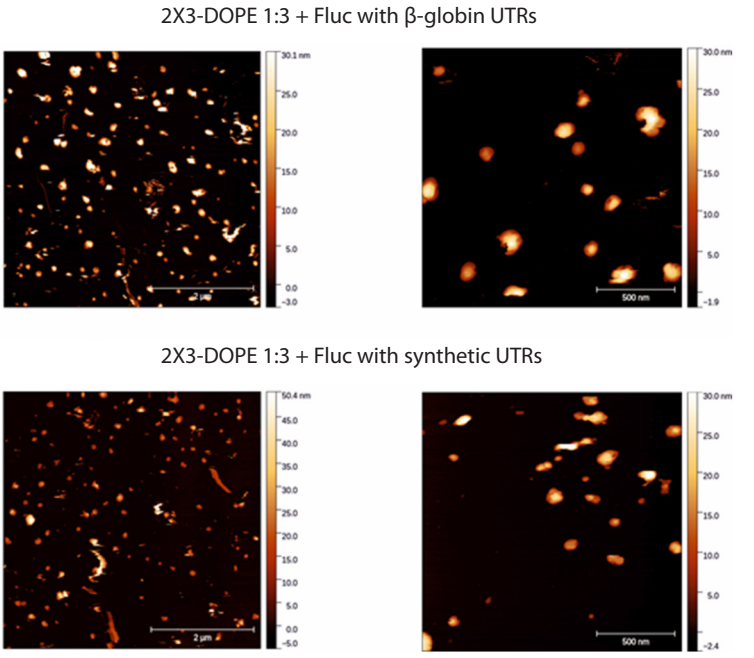

Fig. S6. AFM imaging of liposomes 2X3-DOPE 1:3 and their lipoplexes with FLuc mRNA containing different UTRs.

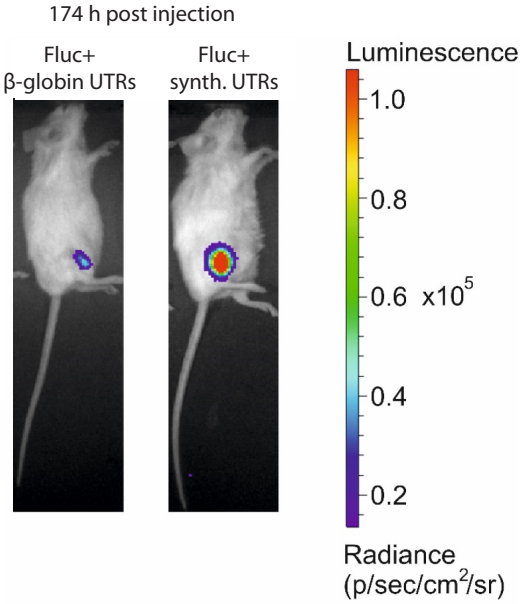

Fig. S7. The prolonged expression of FLuc with various UTRs in mice (174 h post injection).