Supplementary Materials

Supplementary Methods

Integrity of RNA

RNA was extracted from lipid nanoparticle (LNP)-encapsulated RBD-mRNA complexes using phenol : chloroform (Sigma) (at 1:1 volume) (Gerhardt et al., 2022). The extracted RNA was mixed with formaldehyde load dye (Thermo Fisher Scientific), and incubated for 10 min at 70°C. One μg of RNA was loaded to each well, and run on a denatured agarose gel (1%).

Reference

Gerhardt, A., Voigt, E., Archer, M., Reed, S., Larson, E., Van Hoeven, N., Kramer, R., Fox, C., Casper, C., 2022. A flexible, thermostable nanostructured lipid carrier platform for RNA vaccine delivery. Mol Ther Methods Clin Dev 25, 205-214.

Supplementary Figure 1

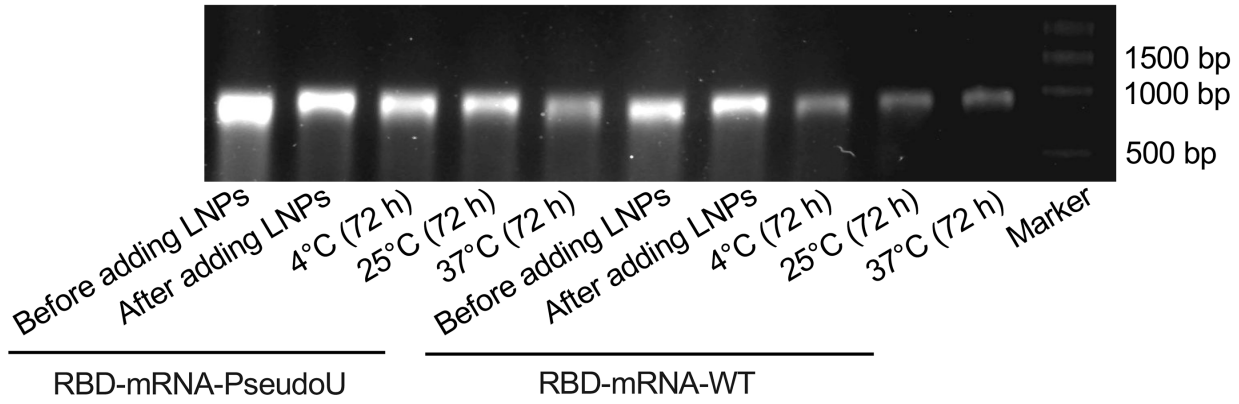

Fig. S1. Agarose gel electrophoresis of RNA extracted from RBD-mRNA-LNP complexes. RNA was extracted from LNP-encapsulated RBD-mRNA complexes at the indicated temperatures and time points. The RNA with (e.g., just after LNP formulation) or without (e.g., before adding LNPs) encapsulation with LNPs was included as control. Molecular weight marker is shown on the right.