Science Advances
AAAS

Supplementary Materials for

Structural and biochemical characteristics of mRNA nanoparticles determine anti–SARS-CoV-2 humoral and cellular immune responses

Yingying Shi *et al.*

Corresponding author: Yunqing Qiu, qiuyq@zju.edu.cn; Jian You, youjiandoc@zju.edu.cn;
Yan Lou, yanlou@zju.edu.cn

Sci. Adv. **8**, eabo1827 (2022)
DOI: 10.1126/sciadv.abo1827

This PDF file includes:

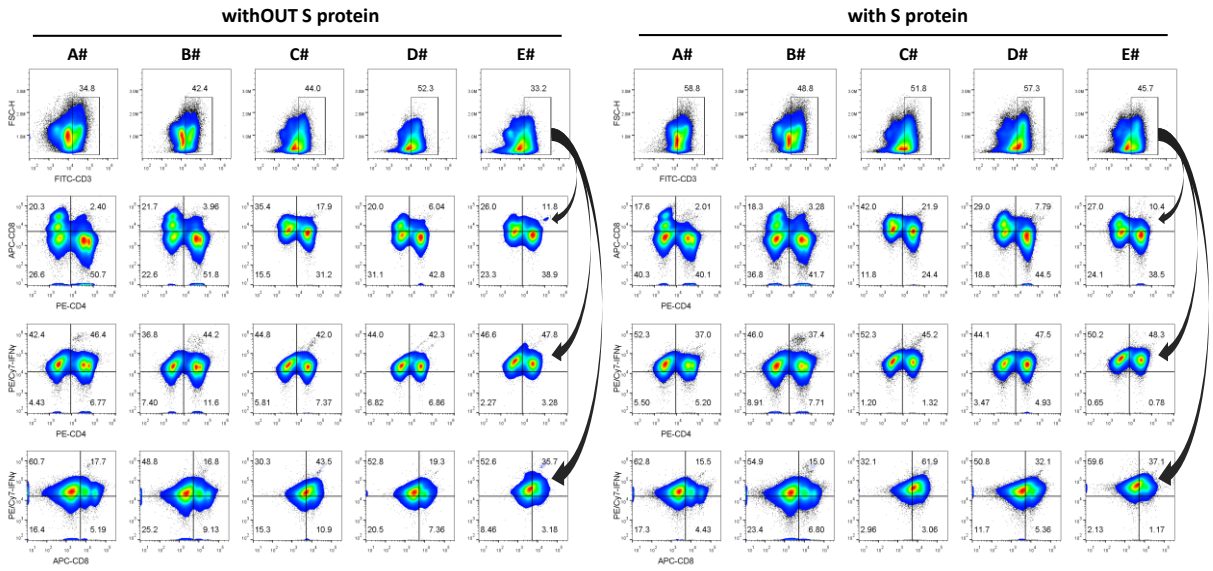

Fig. S1.

Representative flow cytometric pictures of data showing the frequency of $CD8^+$ T cells, $CD4^+$ T cells, IFN-γ^+ $CD8^+$ T cells and IFN-γ^+ $CD4^+$ T cells in splenic lymphocytes ex vivo stimulated with (right) or without (left) S protein for 48 hours.

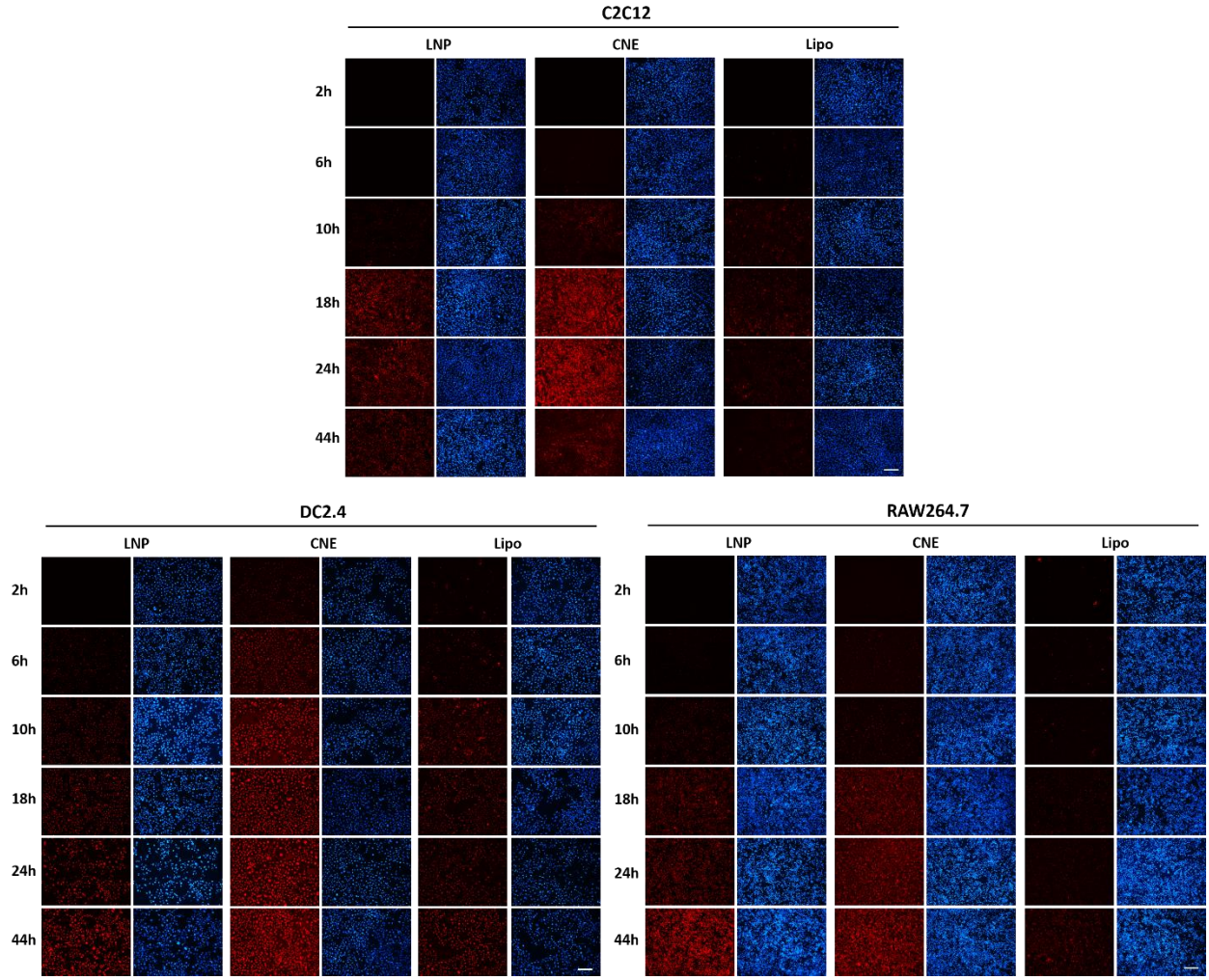

Fig. S2.

Cellular uptake of different nanoparticles by C2C12, DC2.4, and RAW264.7. Fluorescence images of C2C12, DC2.4, and RAW264.7 treated with LNP, CNE, or Lipo for 2, 6, 10, 18, 24 or 44 hours. Red: DiD-labelled nanoparticles, blue: nucleus. Scale bar: 200 μm.

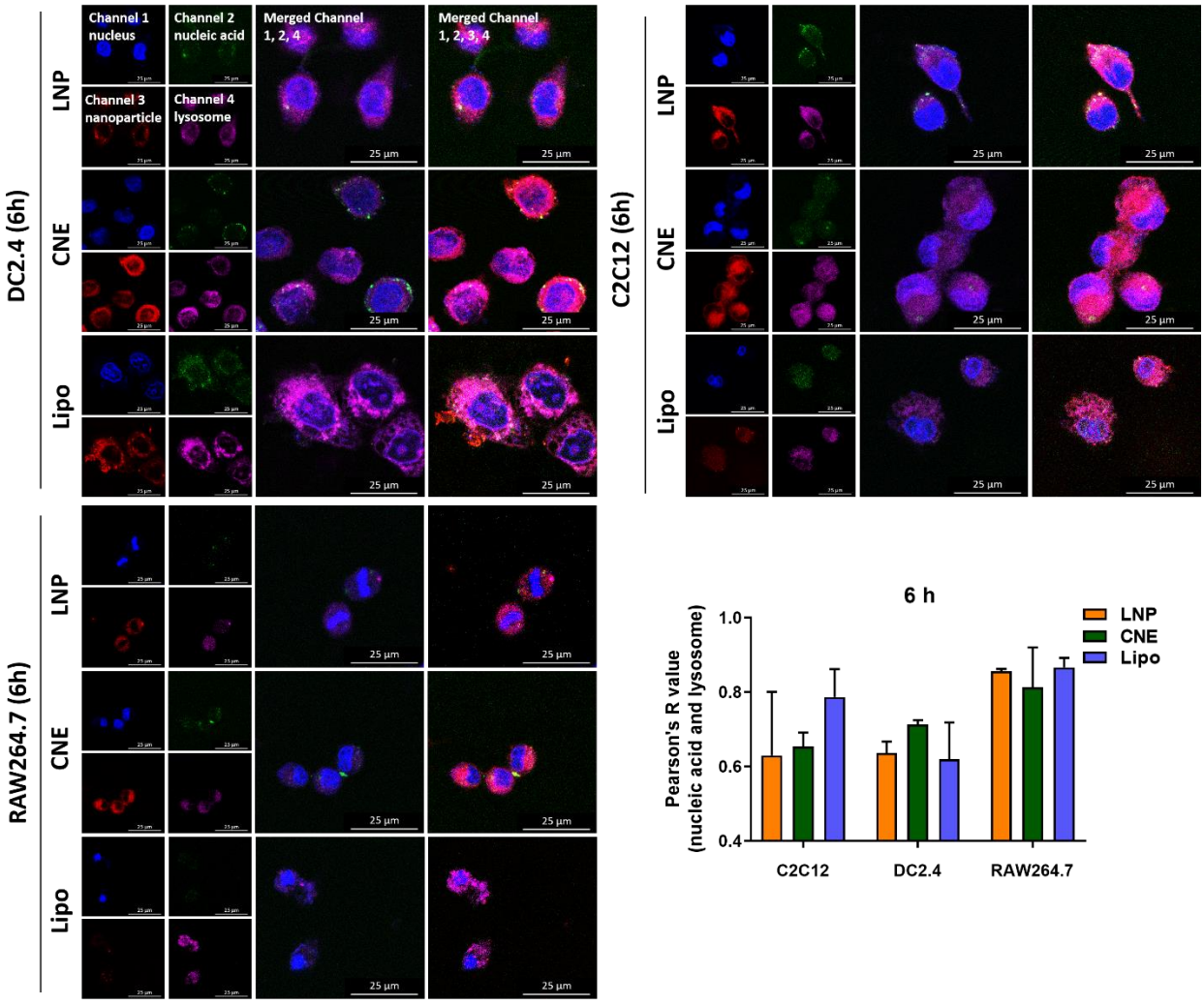

Fig. S3.

Lysosome escape of LNP, CNE and Lipo by myocytes and APCs at 6 hours. Confocal microscopic observation of the lysosome escape of nanoparticles in C2C12, DC2.4, and RAW264.7 at 6 hours post treatment. Scale bar, 25 μm. Images were analyzed to calculate the colocalization ratio of lysosomes and nanoparticles based on the Pearson's correlation coefficient (n = 3). All error bars were expressed as ± SD.

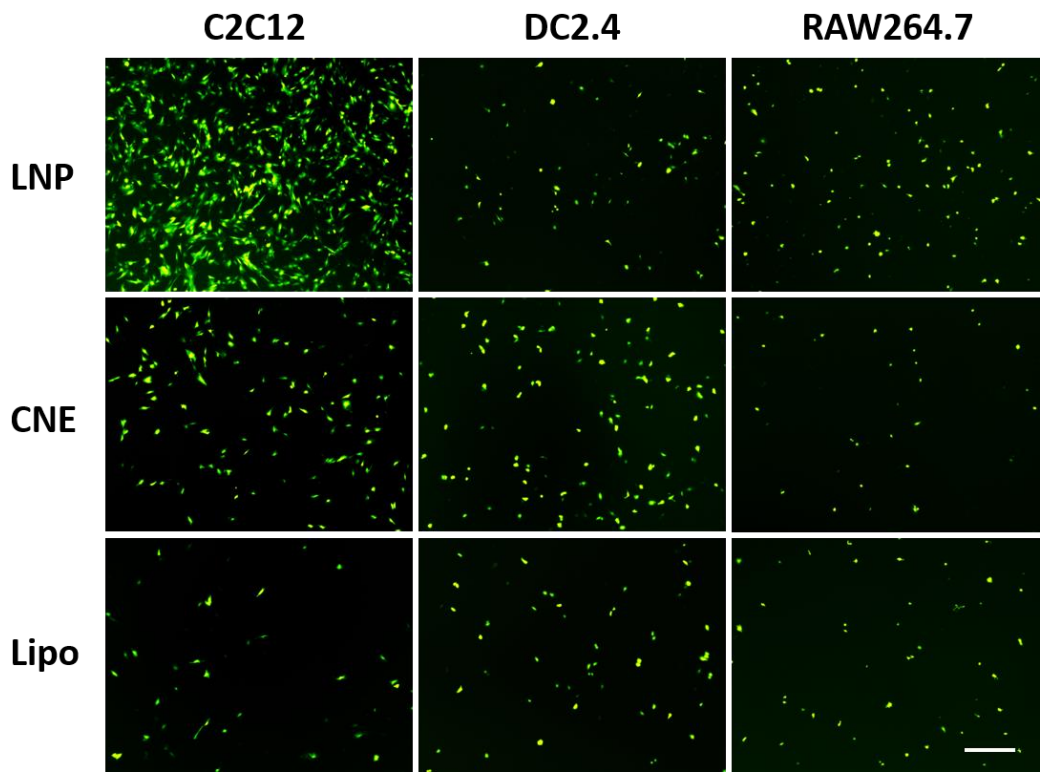

Fig. S4.

Fluorescence pictures of in vitro transfected C2C12, DC2.4, and RAW264.7 with different eGFP mRNA nanoparticles at 24 hours. Scale bar: 200 μm.