

Generation and Assembly of Virus-Specific Nucleocapsids of the Respiratory Syncytial Virus

 Yunrong Gao¹, Claire Ogilvie¹, Anirudh Raghavan¹, Chloe Von Hoffmann¹, Bo Liang¹
¹Department of Biochemistry, Emory University School of Medicine

Corresponding Author

Bo Liang

bo.liang@emory.edu

Citation

 Gao, Y., Ogilvie, C., Raghavan, A., Von Hoffmann, C., Liang, B. Generation and Assembly of Virus-Specific Nucleocapsids of the Respiratory Syncytial Virus. *J. Vis. Exp.* (173), e62010, doi:10.3791/62010 (2021).

Date Published

July 27, 2021

DOI

10.3791/62010

URL

jove.com/video/62010

Materials

| Name | Company | Catalog Number | Comments |
|--|------------------------------|----------------|--------------------------------------|
| Agarose | Sigma | A9539-500G | making construct using LIC method |
| Amicon Ultra-15 Centrifugal Filter Unit | Millipore | UFC901024 | concentrate the protein sample |
| Ampicillin sodium | GOLD BIOTECHNOLOGY | 5118.111317A | antibiotic for cell culture |
| Asel | NEB | R0526S | making construct using LIC method |
| Cobalt (High Density) Agarose Beads | Gold Bio | H-310-500 | For purification of His-tag protein |
| Corning LSE Digital Dry Bath Heater | CORNING | 6885-DB | Heate the sample |
| dCTP | Invitrogen | 10217016 | making construct using LIC method |
| dGTP | Invitrogen | 10218014 | making construct using LIC method |
| Glycerol | Sigma | G5516-4L | making solution |
| HEPES | Sigma | H3375-100G | making solution |
| HiTrap Q HP | Sigma | GE29-0513-25 | Protein purification |
| Imidazole | Sigma | I5513-100G | making solution |
| IPTG (Isopropyl-beta-D-thiogalactopyranoside) | GOLD BIOTECHNOLOGY | 1116.071717A | induce the expression of protein |
| Microcentrifuge Tubes | VWR | 47730-598 | for PCR |
| Misonix Sonicator XL2020 Ultrasonic Liquid Processor | SpectraLab | MSX-XL-2020 | sonicator for lysing cell |
| Negative stain grids | Electron Microscopy Sciences | CF400-Cu-TH | For making negative stain grids |
| New Brunswick Innova 44/44R | eppendorf | M1282-0000 | Shaker for culturing the cell |
| Nonidet P 40 Substitute | Sigma | 74385-1L | making solution |
| OneTaq DNA Polymerase | NEB | M0480L | PCR |
| QIAquick Gel Extraction Kit | QIAGEN | 28706 | Purify DNA |
| SSPI-HF | NEB | R3132S | making construct using LIC method |
| Superose 6 Increase 10/300 GL | Sigma | GE29-0915-96 | Protein purification |
| T4 DNA polymerase | Sigma | 70099-3 | making construct using LIC method |
| Thermo Scientific Sorvall RC 6 Plus Centrifuge | Fisher Scientific | 36-101-0816 | Centrifuge, highest speed 20,000 rpm |
| Trizma hydrochloride | Sigma | T3253-250G | making solution |

| | | | |
|----------------|------------------------------|-------|--------------------------------|
| Uranyl Formate | Electron Microscopy Sciences | 22451 | making negative stain solution |
|----------------|------------------------------|-------|--------------------------------|