

Vector pET-11a Containing the SARS-Related Coronavirus 2, Wuhan-Hu-1 Nucleocapsid Protein C-Terminal Domain Gene

Catalog No. NR-52434

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Contributor:

Karla J. Satchell, Ph.D., Principal Investigator and Co-Director, Center for Structural Genomics of Infectious Diseases, Department of Microbiology-Immunology, Northwestern University, Chicago, Illinois, USA

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Manufacturer:

BEI Resources

Product Description:

The C-terminal domain (CTD) of the nucleocapsid (N) protein (amino acids 247 to 364; GenPept: [QHD43423](#)) from severe acute respiratory syndrome-related coronavirus 2 (SARS-CoV-2), Wuhan-Hu-1 (GenBank: [MN908947](#)) was codon optimized, tagged with a tobacco etch virus (TEV) cleavable N-terminal hexa-histidine tag and cloned into the pET-11a plasmid (Novagen®).^{1,2} The beta-lactamase gene, *bla*, provides transformant selection through ampicillin resistance in *Escherichia coli* (*E. coli*). The complete plasmid sequence and map are provided on the BEI Resources webpage. The plasmid was produced in *E. coli* and extracted.

The N protein is involved in the replication, transcription and packaging of the viral genome, and is a target of vaccine and diagnostic assays due to its abundance and its ability to generate a high immunogenic response.³

Material Provided:

Each vial contains plasmid DNA in TE buffer (10 mM Tris-HCl, 1 mM EDTA, pH 8.0). The DNA concentration and volume provided are shown on the Certificate of Analysis. The vial should be centrifuged prior to opening. Note: The contents of the vial should be used to replicate the plasmid in *E. coli* prior to expression studies.

Packaging/Storage:

NR-52434 was packaged aseptically in screw-capped plastic cryovials. The product is provided frozen on dry ice and

should be stored at -20°C or colder immediately upon arrival. Freeze-thaw cycles should be minimized.

Citation:

Acknowledgment for publications should read “The following reagent was obtained through BEI Resources, NIAID, NIH: Vector pET-11a Containing the SARS-Related Coronavirus 2, Wuhan-Hu-1 Nucleocapsid Protein C-Terminal Domain Gene, NR-52434, contributed by the Center for Structural Genomics of Infectious Diseases under HHSN272201700060C.”

Biosafety Level: 1

Appropriate safety procedures should always be used with this material. Laboratory safety is discussed in the following publication: U.S. Department of Health and Human Services, Public Health Service, Centers for Disease Control and Prevention, and National Institutes of Health. Biosafety in Microbiological and Biomedical Laboratories. 6th ed. Washington, DC: U.S. Government Printing Office, 2020; see www.cdc.gov/biosafety/publications/bmb15/index.htm.

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References:

1. Satchell, K. J., Personal Communication.
2. Wu, F., et al. "A New Coronavirus Associated with Human Respiratory Disease in China." Nature 579 (2020): 265-269. PubMed: 32015508.
3. Tilocca, B., et al. "Comparative Computational Analysis of SARS-CoV-2 Nucleocapsid Protein Epitopes in Taxonomically Related Coronaviruses." Microbes Infect. 22 (2020): 188-194. PubMed: 32302675.

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