

Product Information Sheet for NR-53507

Vector pET-28a(+) Containing the SARS-Related Coronavirus 2, Wuhan-Hu-1 Nucleocapsid Gene

Catalog No. NR-53507

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For research use only. Not for human use.

Contributor:

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The materials described herein were provided by the Seattle Structural Genomics of Infectious Diseases which is supported by Federal Contract No HHSN272201700059C from the National Institute of Allergy and Infectious Diseases, National Institutes of Health, Department of Health and Human Services.

Manufacturer:

BEI Resources

Product Description:

The nucleocapsid (N) gene 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-28a\(+\)](#) plasmid.^{1,2} The kanamycin resistance gene, *aph*, provides transformant selection through kanamycin resistance in *Escherichia coli* (*E. coli*). The resulting size of the plasmid is approximately 6570 base pairs. 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-53507 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-28a(+) Containing the SARS-Related Coronavirus 2, Wuhan-Hu-1 Nucleocapsid Gene, NR-53507."

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. 5th ed. Washington, DC: U.S. Government Printing Office, 2009; see www.cdc.gov/biosafety/publications/bmbi5/index.htm.

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References:

1. Van Voorhis, W., 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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