Vector pMCSG53 Containing the SARS-Related Coronavirus 2, Wuhan-Hu-1 Non-Structural Protein 15 Gene

Catalog No. NR-52426
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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 non-structural protein 15 (nsp15) gene from severe acute respiratory syndrome-related coronavirus 2 (SARS-CoV-2), Wuhan-Hu-1 (GenBank: MN908947) was codon optimized and cloned into the pMCSG53 plasmid.1,2 pMCSG53 is an Escherichia coli (E. coli) expression vector that contains an N-terminal hexa-histidine tag, followed by a tobacco etch virus (TEV) protease recognition site prior to the insert coding sequence, resulting in the expression of a cleavable histidine-tagged protein. It also contains tRNA genes covering rare codons for Arg (AGG/AGA) and Ile (AUA) to improve expression in E. coli. The beta-lactamase gene, bla, provides transformant selection through ampicillin resistance in E. coli.3,4 The resulting size of the plasmid is approximately 5850 base pairs. The complete plasmid sequence and map are provided on the BEI Resources webpage. The plasmid was produced in E. coli and extracted.

Non-structural protein 15 is an uridylate-specific endoribonuclease whose exact function is unknown.5,6

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-52426 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 pMCSG53 Containing the SARS-Related Coronavirus 2, Wuhan-Hu-1 Non-Structural Protein 15 Gene, NR-52426, contributed by the Center for Structural Genomics of Infectious Diseases under HHSN272201700060C.”

Biosafety Level: 1

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References:

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