Plasmid pUC57-Simple Containing cDNA from Enterovirus D68, USA/IL/2018-23252, Infectious Clone EV-D68-R23252

Catalog No. NR-52380

For research use only. Not for use in humans.

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Manufacturer:
BEI Resources

Product Description:
The enterovirus species D type 68 (EV-D68), USA/IL/2018-23252 (GenBank: MN246015) genome was cloned into the *Escherichia coli (E. coli)* cloning vector pUC57-simple to generate plasmid EV-D68-R23252.[1,2] EV-D68-R23252 contains a T7 bacteriophage promoter immediately upstream of the 5' end of the viral genome. Transfection of cells with RNA transcribed *in vitro* from the linearized plasmid results in production of infectious virus particles.[2] EV-D68-R23252 also contains the beta-lactamase gene, *bla*, to provide transformant selection through ampicillin resistance in *E. coli*. The resulting size of the plasmid is approximately 10,120 base pairs.[1] The complete plasmid sequence and map are provided on the BEI Resources webpage. The plasmid was produced in *E. coli* and extracted.

NR-52380 has been qualified for use in bacterial transformations.

EV-D68, USA/IL/2018-23252 was isolated in 2018 from a patient with acute flaccid myelitis (AFM) in Illinois, USA. Information regarding causation between EV-D68 and AFM is still limited, however, rapidly accumulating clinical, immunological and epidemiological evidence points to EV-D68 as a major causative agent of AFM.[3,4]

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-52380 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: Plasmid pUC57-Simple Containing cDNA from Enterovirus D68, USA/IL/2018-23252, Infectious Clone EV-D68-R23252, NR-52380."

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/bmbl5/index.htm.

Disclaimers:
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References:
1. Anstadt, J., Personal Communication.
2. Guo, X., et al. "Efficient RNA/Cas9-mediated Genome Editing in *Xenopus Tropicalis*." Development 141 (2014): 707-714. PubMed: 24401372.

3. Hixon, A. M., et al. "Understanding Enterovirus D68-Induced Neurologic Disease: A Basic Science Review." Viruses 11 (2019): doi: 10.3390/v11090821. PubMed: 31487952.
4. Sun, J., X. Y. Hu and X. F. Yu. "Current Understanding of Human Enterovirus D68." Viruses 11 (2019): doi: 10.3390/v11060490. PubMed: 31146373.

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