Plasmid pUC57-Simple Containing cDNA from Enterovirus D68, USA/WI/2009-23230, Infectious Clone EV-D68-R23230

Catalog No. NR-52377

For research use only. Not for use in humans.

Contributor:
Jennifer Anstadt, Ph.D., Team Lead, Polio and Picornavirus Laboratory Branch, Centers for Disease Control and Prevention, Atlanta, Georgia, USA

Manufacturer:
BEI Resources

Product Description:
The enterovirus species D type 68 (EV-D68), USA/WI/2009-23230 (GenBank: MN240506) genome was cloned into the *Escherichia coli (E. coli)* cloning vector pUC57-simple to generate plasmid EV-D68-R23230.[1,2] EV-D68-R23230 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-R23230 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 10,130 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-52377 has been qualified for use in bacterial transformations.

EV-D68, USA/WI/2009-23230 was isolated in 2009 from a human in Wisconsin, USA. EV-D68 is an enterovirus that is a potential human pathogen. Rapidly accumulating clinical, immunological and epidemiological evidence points to EV-D68 as a major causative agent of acute flaccid myelitis (AFM), however, information regarding causation between EV-D68 and AFM is still limited.[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-52377 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/WI/2009-23230, Infectious Clone EV-D68-R23230, NR-52377."

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:
You are authorized to use this product for research use only. It is not intended for human use.

Use of this product is subject to the terms and conditions of the BEI Resources Material Transfer Agreement (MTA). The MTA is available on our Web site at www.beiresources.org.

While BEI Resources uses reasonable efforts to include accurate and up-to-date information on this product sheet, neither ATCC® nor the U.S. Government makes any warranties or representations as to its accuracy. Citations from scientific literature and patents are provided for informational purposes only. Neither ATCC® nor the U.S. Government warrants that such information has been confirmed to be accurate.

This product is sent with the condition that you are responsible for its safe storage, handling, use and disposal. ATCC® and the U.S. Government are not liable for any damages or injuries arising from receipt and/or use of this product. While reasonable effort is made to ensure authenticity and reliability of materials on deposit, the U.S. Government, ATCC®, their suppliers and contributors to BEI Resources are not liable for damages arising from the misidentification or misrepresentation of products.

Use Restrictions:
This material is distributed for internal research, non-commercial purposes only. This material, its product or its derivatives may not be distributed to third parties. Except as performed under a U.S. Government contract, individuals contemplating commercial use of the material, its products or its derivatives must contact the contributor to determine if a license is required. U.S. Government contractors may need a license before first commercial sale.

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.

Support Provided by NIAID

BEI Resources
www.beiresources.org

E-mail: contact@beiresources.org
Tel: 800-359-7370
Fax: 703-365-2898