

Dengue Virus Type 1 Primers

Catalog No. NR-12078

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For research use only. Not for use in humans.

Contributor and Manufacturer:

BEI Resources

Product Description:

There are four antigenically related but genetically distinct serotypes of dengue virus, types 1 through 4 (DENV-1 to DENV-4, respectively). NR-12078 contains forward and reverse primers that specifically amplify a region of the non-structural protein 3 (NS3) gene of DENV-1. A PCR protocol is outlined in Appendix I.

Material Provided:

Each vial contains approximately 100 µL of a mixture of forward and reverse primers in TE buffer (10 mM Tris-HCl, 1 mM EDTA, pH ~ 7). The concentration is shown on the Certificate of Analysis.

Packaging/Storage:

Primers were packaged aseptically in cryovials. The product is provided frozen on dry ice and should be stored at -60°C or colder upon arrival. Freeze-thaw cycles should be minimized.

Citation:

Acknowledgment for publications should read "The following reagent was obtained through BEI Resources, NIAID, NIH: Dengue Virus Type 1 Primers, NR-12078."

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 (BMBL). Current Edition. Washington, DC: U.S. Government Printing Office.

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APPENDIX I: DENGUE VIRUS TYPE 1 (DENV-1) PCR PROTOCOL

Recommended Reagents/Equipment

Reagent	Source	Catalog No.
DENV-1 Primers	BEI Resources	NR-12078
Positive Control Template, Genomic RNA from DENV-1, Hawaii	BEI Resources	Genomic RNA from NR-82
Qiagen® OneStep RT-PCR Kit	Qiagen	210212

Reaction Mix¹

Reagent	Stock Concentration	Volume per Reaction (µL)
RNase-free water	N/A	23
Qiagen® OneStep RT-PCR Buffer	5×	10
Q Solution	5×	10
dNTP Mix	10 mM (each solution)	2
Qiagen® OneStep RT-PCR Enzyme Mix	N/A	2
Primers ²	10 µM (each primer)	1
Template	50 ng to 500 ng	2
		Total – 50 µL

¹Reaction mix should be kept on bench-top cooler until ready for use.

²Primers are supplied at working stock concentrations.

Cycling Protocol

Cycle	No. of Repeats	Step	Conditions
1	1	1	54°C for 30 minutes
1	1	1	95°C for 15 minutes
2	35	1	94°C for 30 seconds
		2	54°C for 30 seconds
		3	72°C for 2 minutes
3	1	1	72°C for 7 minutes
4	Indefinite	1	Hold at 4°C