

Dengue Virus Type 4 Primers

Catalog No. NR-12081

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Contributor:

NIH Biodefense and Emerging Infections Research Resources Repository

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-12081 contains forward and reverse primers that specifically amplify a region of the NS2A gene of DENV-4. A 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 (pH 7.0). The concentration is shown on the Certificate of Analysis.

Packaging/Storage:

Primers were packaged aseptically in screw-capped plastic 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 the NIH Biodefense and Emerging Infections Research Resources Repository, NIAID, NIH: Dengue Virus Type 4 Primers, NR-12081."

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, 2007; see www.cdc.gov/od/ohs/biosfty/bmb15/bmb15toc.htm.

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APPENDIX I

Dengue Virus Type 4 (DENV-4) Primers

Recommended Reagents/Equipment

Reagent	Source	Catalog #
DENV-4 Primers	BEI Resources	NR -12081
Positive Control Template, Genomic RNA from DENV-4, H241	BEI Resources	Genomic RNA from NR-86
Qiagen OneStep RT-PCR Kit	Qiagen	210212

Reaction Mix¹

Reagent	Stock Concentration	Volume per Reaction (µL)
RNase-free water	---	23
Qiagen OneStep RT-PCR Buffer	5X	10
Q Solution	5X	10
dNTP Mix	10 mM each	2
Qiagen OneStep RT-PCR Enzyme Mix	---	2
Primers ²	10 µM (each primer)	1
Template	50 to 5000 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	# 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