

Influenza A Virus H4 Primers

Catalog No. NR-15419

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For research use only. Not for human use.

Contributor:

NIH Biodefense and Emerging Infections Research Resources Repository, NIAID, NIH

Manufacturer:

Integrated DNA Technologies, Inc.

Product Description:

Influenza A viruses are classified into subtypes and named based on the identity of their neuraminidase and hemagglutinin (HA) surface proteins. NR-15419 contains forward and reverse primers that specifically amplify a region of the HA gene of influenza A virus subtype 4 (H4). A protocol is outlined in Appendix I.

Material Provided:

Each vial contains approximately 80 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, rather than at -20°C or colder as indicated on the vial label.** 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: Influenza A Virus H4 Primers, NR-15419."

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/bmbl5/bmbl5toc.htm.

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References:

1. Lee, M. S., et al. "Identification and Subtyping of Avian Influenza Viruses by Reverse Transcription-PCR." [J. Virol. Methods](#) 97 (2001): 13-22. PubMed: 11483213.

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APPENDIX I

Influenza A Virus H4 Primers

Recommended Reagents

Reagent	Source	Catalog #
Influenza A Virus H4 Primers	BEI Resources	NR-15419
Qiagen® OneStep RT-PCR Kit	Qiagen	210212

Reaction Mix¹

Reagent	Stock Concentration	Volume per Reaction (µL)
RNase-free water	---	19
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	50 µM (each primer)	2
Template	50 to 5000 ng	5
		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	50°C for 30 minutes
1	1	1	95°C for 15 minutes
2	35	1	94°C for 30 seconds
		2	55°C for 30 seconds
		3	72°C for 1 minute
3	1	1	72°C for 1 minute
4	Indefinite	1	Hold at 4°C