



ProFoldin

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INSTRUCTIONS

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Human Cytomegalovirus (HCMV) DNA Polymerase Assay Kits

Human Cytomegalovirus (HCMV) DNA Polymerase Assay Kit

HCMV100K

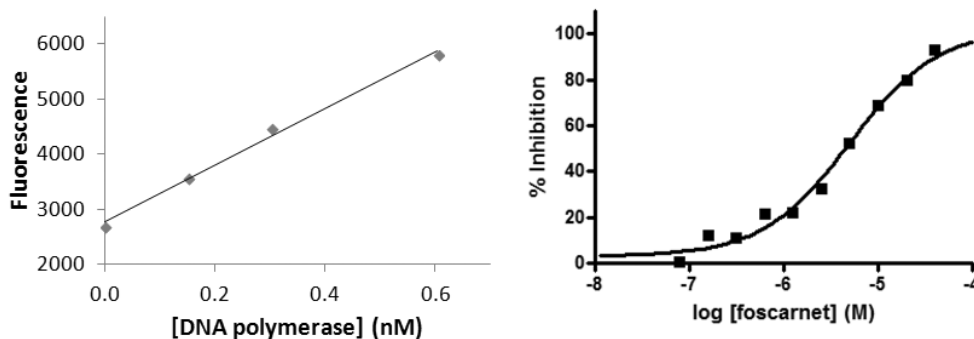
Human Cytomegalovirus (HCMV) DNA Polymerase Assay Kit Plus-100

HCMV100KE

Introduction

Human cytomegalovirus (HCMV) or human betaherpesvirus 5 belongs to the viral family of herpesviruses. HCMV encodes for its own DNA polymerase and uses the host RNA polymerase for the transcription of all of its genes. The HCMV DNA polymerase is a key enzyme in the lytic phase of the infection. The HCMV DNA polymerase assay is based on measurement of the DNA molecules synthesized by the DNA polymerase in the presence of a DNA template and dNTPs. The assay can be performed in a 384-well or 96-well plate format for tests of the enzyme activities of HCMV DNA polymerases and high throughput screening of inhibitors.

Human Cytomegalovirus (HCMV) DNA polymerase assay



The **Human Cytomegalovirus (HCMV) DNA Polymerase Assay Kit** (Catalog No. HCMV100K) includes all the assay kit components except the enzyme. It includes 400 μ l of 10 x Buffer, 33 μ l of 100 x DNA template, 33 μ l of 100 x dNTP, 1550 μ l of 2 x Dye and 1550 μ l of 50 mM EDTA.

The **Human Cytomegalovirus (HCMV) DNA Polymerase Assay Kit Plus -1000** (Catalog No. HCMV100KE) includes all the assay kit components. It includes 400 μ l of 10 x Buffer, 33 μ l of 100 x DNA template, 33 μ l of 100 x dNTP, 33 μ l of 100 x HCMV DNA polymerase, 1550 μ l of 2 x Dye and 1550 μ l of 50 mM EDTA.

ASSAY PROTOCOL

The following assay protocol is based on the 384-well plate assay format (plate type: Matrix 4318 or alike). The reaction volume is 30 μ l and the final assay volume is 60 μ l. For 96-well plate assays (plate type: Costar 3915 or alike), the reaction volume is 60 μ l and the final assay volume is 120 μ l.



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1. Reaction:

The total volume of each reaction mixture is 30 µl including 26.1 µl of H₂O, 3 µl of 10 x Buffer, 0.3 µl of 100 x template, 0.3 µl of 100 x RNA polymerase and 0.3 µl of 100 x NTPs. Incubate the reaction mixture at 37°C for 60 min.

2. Detection:

Dilute the 2 x fluorescence dye with 50 mM EDTA to make the 1 x dye. Mix 30 µl of the 1 x dye with 30 µl of the reaction mixture. Measure the fluorescence intensity at 535 nm using the excitation wavelength at 485 nm in 5 min.

Assay Protocol for enzyme inhibition

The assay can be optimized in terms of assay window, assay linearity and sensitivity to competitive inhibitors. ProFoldin offers HTS assay development service. For more information, please visit our website at <http://www.profoldin.com/services.html>.

Related Products

RNA polymerase assay kits:

VRT100K	Viral RNA-dependent RNA Polymerase Assay Kit - 100
RPA100KE	<i>E. coli</i> RNA Polymerase Assay Kit Plus
RPA100KSE	<i>S. aureus</i> RNA Polymerase Assay Kit Plus
MRPA100KE	Human Mitochondrial RNA Polymerase Assay Kit Plus
T7RPA100KE	T7 RNA Polymerase Assay Kit Plus
EGA100KE	<i>E. coli</i> DNA Primase Assay Kit Plus
HGA100KE	<i>H. influenzae</i> DNA Primase Assay Kit Plus
AGA100KE	<i>S. aureus</i> DNA Primase Assay Kit Plus
PGA100KE	<i>S. pneumoniae</i> DNA Primase Assay Kit Plus

DNA polymerase assay kits:

DPA100KE	<i>E. coli</i> DNA Polymerase III Alpha Assay Kit Plus
DPA100KH	<i>H. influenzae</i> DNA Polymerase Assay Kit Plus
DPA100KN	<i>S. pneumoniae</i> DNA Polymerase Assay Kit Plus
HDP A100KE	Human DNA Polymerase Alpha Assay Kit Plus
DPB100KE	Human DNA Polymerase Beta Assay Kit Plus
DPG100KE	Human DNA Polymerase Gamma Assay Kit Plus
HIV100KE	HIV Reverse Transcriptase Assay Kit Plus
AMV100KE	AMV Reverse Transcriptase Assay Kit Plus
MLV100KE	M-MLV Reverse Transcriptase Assay Kit Plus

For more information of drug targets and enzyme assays, please visit www.profoldin.com or send emails to info@profoldin.com.